WONDERLAND
1903

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MOUNT HOOD AND GLACIERS

From Cloud Cap Inn, 11,225 feet high.

WONDERLAND 1903

By Olin D. Wheeler

Descriptive of the country
contiguous to the

NORTHERN PACIFIC RAILWAY.

SOME OF THE
SPECIAL SUBJECTS
TREATED OF
IN THIS NUMBER ARE,

The Travels of Father Hennepin,
The Franciscan Friar, in the
Northwest in the 17th Century;

The Mandan Indians·····of
The Upper Missouri River,
A Declining Race;

Irrigation in the Northwest;
Yellowstone National Park;
and the
Columbia River,
The so called Oregon,
well named
The Great River of the West.

ILLUSTRATED

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NORTHERN PACIFIC RAILWAY, ST. PAUL

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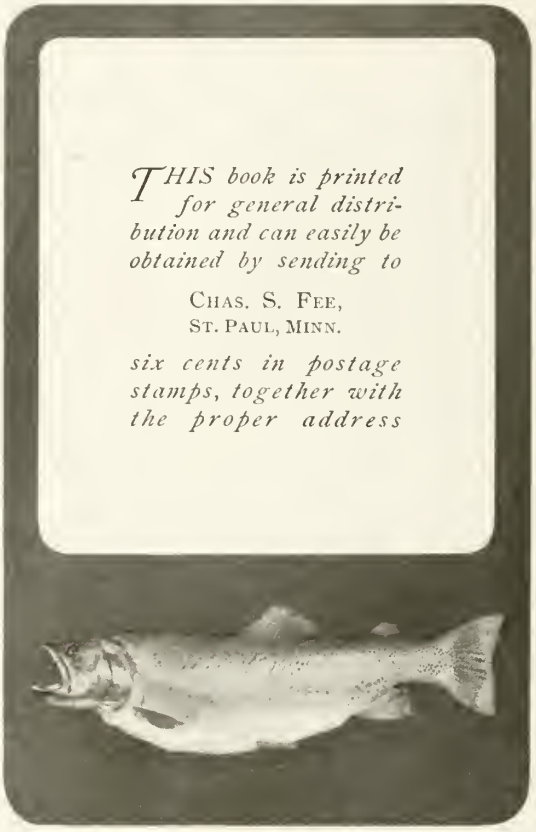


A YELLOWSTONE RIVER TROUT

WEIGHT, 7 LBS. 3 OZ
LENGTH, . 24 INCHES
WIDTH, . . 6 INCHES

PRIEST
AND
EXPLORER

PRIEST AND EXPLORER.

THAT portion of the Northwest of which Western Wisconsin and Eastern Minnesota may not inaptly be styled the storm center, was, in the seventeenth and eighteenth centuries a favorite stamping ground, so to speak, or *ultima thule*, of adventurers and explorers. There

St. Anthony Fall in 1903. Showing flouring mills at Minneapolis, wagon bridge, railway stone arch viaduct, and a bit of the fall.

was a good reason for this. The geographical myth of a northwest passage between the Atlantic and Pacific represented by the fictitious Strait of Anian, was an all-absorbing feature of very early geographic search. The Strait of Juan de Fuca is all that remains of the Anian strait, but the objects of exploration were widened and the literature and annals of exploration were wonderfully enriched by the persistent quest for a something that did not exist.

The earliest attempts at exploration in the middle Northwest were made by the French from their vantage ground about Montreal and Quebec on the St. Lawrence. The route westward was usually and naturally by way of the Great Lakes. At Mackinac — Michilimackinac — the stream of exploration divided. A part of it pushed on to Fond du Lac at the head of Lake Superior and near the present Duluth, and then, usually, either northwestward toward Lake Winnipeg by convenient streams, or, by the affluents of the

A group of rustic beauties (Leech Lake).

** Old map of New France and Louisiana.*

* From Geological and Natural History Survey of Minnesota, 1882-1885.

Mississippi after necessary portages, to the headwaters of the latter stream. Another part followed along the shores of Lake Michigan to Green Bay, Milwaukee, or other convenient points, and, canoeing up the easterly flowing streams, made the usual portages and then paddled down the Wisconsin, Illinois, or parallel rivers to the Father of Waters. The region about the headwaters of the latter stream became therefore a sort of geographical pass, or a gateway, between the East and the far Northwest.

Among the many names of those early-day pathfinders none is held in higher esteem than that of La Salle. In late November and early December, 1678, La Salle and his company left Fort Frontenac, or Kingston, Canada, for the head of Lake Ontario. Thence he pushed on to the Niagara river, above the falls, where he established the first shipyard on the Great Lakes, now noted for its shipbuilding. There he built his historic Griffin, the first boat constructed by white men to sail the lakes, and in her they sailed away in August, 1679, to Mackinac and thence to Green Bay.

From this point La Salle, after many weeks of hardship and adventure, finally reached a point on the Illinois river at Lake Peoria, where he built Fort Crevecœur early in 1680.

Among La Salle's company was our "priest and explorer," none other, indeed, than the well-known Father Louis Hennepin, a Franciscan priest of the Recollect order.

A strange combination was the Franciscan, and to this day it is difficult to gauge and determine the real character of the man. Upon one point all historians agree — he was a man of conspicuous and inordinate vanity and much given to exaggeration, particularly of his own dangers and exploits.

One of La Salle's objects was the exploration of the Mississippi, or River Colbert, as it was then called, after a noted French statesman of that day.

For this purpose he detached three men, Michel Accault — or Ako, as Hennepin wrote it — Antoine Auguelle, or "le Picard du Gay" more commonly, and Father Hennepin, and they departed from Fort Crevecœur February 28, 1680. Descending the Illinois river, they reached the Mississippi March 7th and began its ascent; on April 11th were taken captive by a band of Nadouesioux, or Sioux Indians, and were forced to go to the Indian towns or encampment at Lake Buade, or Mille Lac as we now know it. They remained there from about May 5th until early summer — July — in 1680, when, the Indians starting on a great buffalo hunt, Hennepin and Du Gay proceeded down the river — Accault remaining with the Indians — and were found by Du Luth, who was searching for them, some distance below St. Anthony fall. Returning, all of them, for a time to the Indian

encampment at Mille Lac, in the autumn they left the Sioux and, by way of the Mississippi and Wisconsin rivers and the lakes, eventually reached Montreal in 1681. Hennepin, in 1683, published a narrative of his adventures, in Paris, in which these matters are all related in much detail. While his egotism stands out prominently, and his imagination is, perhaps, given a tolerably free rein in this volume, historians seem to agree as to its substantial accuracy.

*Mille Lac, where Hennepin was taken by the Indians.

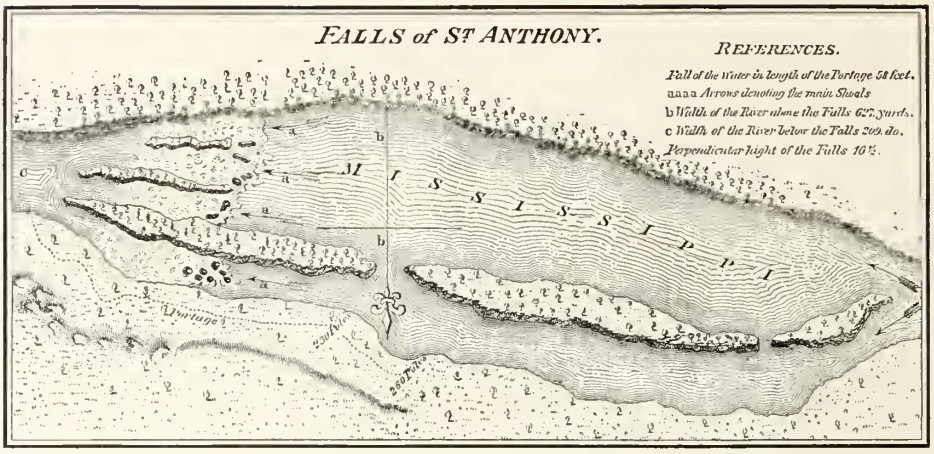
Subsequently other editions of the work appeared in Amsterdam and Utrecht, in which additional matter was interpolated, notably a voyage to the mouth of the Mississippi, made prior to the ascent of that river from the mouth of the Illinois. These editions bore Hennepin's name and have universally been rejected as untruthful and utterly false in many parts of their narratives, and Hennepin has been savagely denounced, and justly so, if he was responsible for them.

Parkman assumes that he was, and while calling him "the most impudent of liars," and his narrative "a rare monument of brazen mendacity," acknowledges that "the early editions of Hennepin's narrative * * * are comparatively truthful."

Shea, whose early opinions coincided with Parkman's, later made

*From "Memoirs of Explorations in the Basin of the Mississippi": Mille Lac, Brower and Bushnell.

St. Paul, Minn.



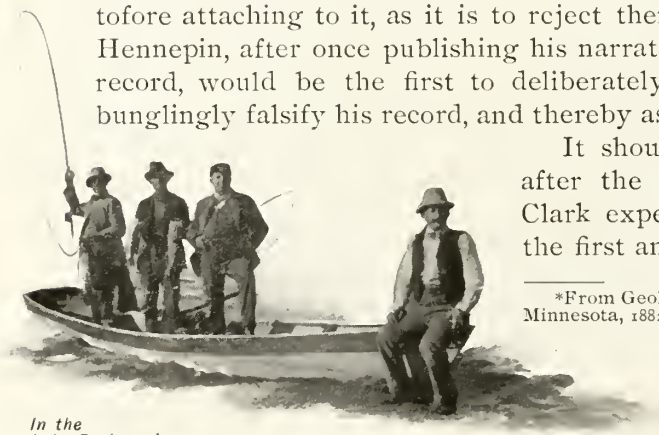
*Pike's Plan of St. Anthony Fall, 1805.

a most extended, thorough, and critical examination of the 1697 and flagrant edition. His conclusions, at variance with his former ones, appear to be impartial, reliable, and based upon common sense, and it would seem, could be accepted by those not swayed by prejudice or in whom a preconceived opinion was not too firmly entrenched to be impossible of dislodgement by reasonable evidence and argument.

The crux of the matter is the voyage to the mouth of the River Colbert or Mississippi and return, which was made in an impossibly short time, and its injection into the story necessitated a rearrangement and readjustment of the original narrative, making it an incongruous, disjointed, unreliable, inharmonious, and absolutely impossible tale.

Shea's argument tends to prove that, although these later editions bore, naturally enough, Hennepin's name on the title pages, he was but little, if at all, responsible for them, and he constructs an argument that, after the careful investigation he gave the subject, is entitled to very great weight.

The first edition, the reliable one, was popular, and there was strong temptation to publish pirated editions. In the light of Shea's reasoning, it would seem as logical and rational, certainly, to accept his conclusions and relieve the Recollect Father's name from the odium theretofore attaching to it, as it is to reject them and thereby assume that Hennepin, after once publishing his narrative and placing himself on record, would be the first to deliberately stab his own reputation, bunglingly falsify his record, and thereby asperse his own name.



In the Lake Park region.

It should be borne in mind that after the return of the Lewis and Clark expedition in 1806, and before the first and genuine Lewis and Clark

*From Geological and Natural History Survey of Minnesota, 1882–1885.

*Eastman's St. Anthony Fall, 1853.

*Hesler's St. Anthony Fall, 1851.

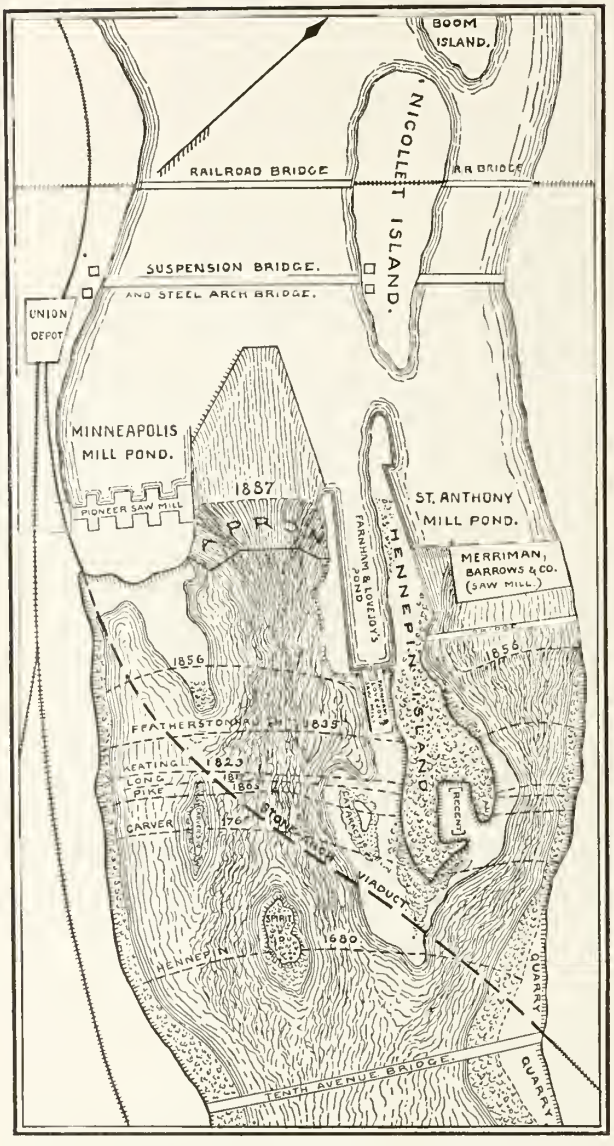
*Carver's St. Anthony Fall, 1778.
*Schoolcraft's St. Anthony Fall, 1820.

report appeared in 1814, there were any number of spurious editions purporting to be authentic records of their work published, not alone in this, but also in other countries, and something of the sort may have happened in connection with Hennepin.

Hennepin wrote the first description of Niagara falls — and what an army of descriptionists has followed him! he assisted, in some sort, in the construction of the first boat built on the Great Lakes, and navigated their waters in her; he first saw and described to the world the now well-known St. Anthony fall, on the Mississippi river.

His recital of his adventures is more or less amusing. He affects that he was in great danger while among the Sioux, and perhaps he was for a time, as there was complete ignorance on each side, of the language of the other, which was undoubtedly embarrassing to say the least.

* From Geological and Natural History Survey of Minnesota, 1882-1885.



*Mississippi River at St. Anthony Fall, showing the recession from 1680 to 1887.

Hennepin called Lake Pepin the Lake of Tears, so named, he says, "because the Indians who had taken us, wishing to kill us, some of them wept the whole night, to induce the others to consent to our death."

At a point at or near St. Paul the Indians left the river and continued the journey to their villages by land, a march which much distressed the Franciscan, owing to its rapidity and the physical discomforts entailed, but in so doing they cut off a big bend of the river, and also avoided a portage at St. Anthony fall.

They reached the river again near Anoka, at the mouth of St. Francis or Rum river, which they ascended to Mille Lac, where their villages were, and which is, archæologically, perhaps the most interesting point in Minnesota.

It was in July, 1680, when with the Indians on the buffalo hunt, that Hennepin first saw St. Anthony fall. He describes this cataract as "forty or fifty feet high, divided in the middle of its fall by a rocky island of pyramidal form." He named the fall, then a natural, impressive, and undoubtedly wild and picturesque one, after his patron saint, St. Anthony

*From Geological and Natural History Survey of Minnesota, 1882-1885.

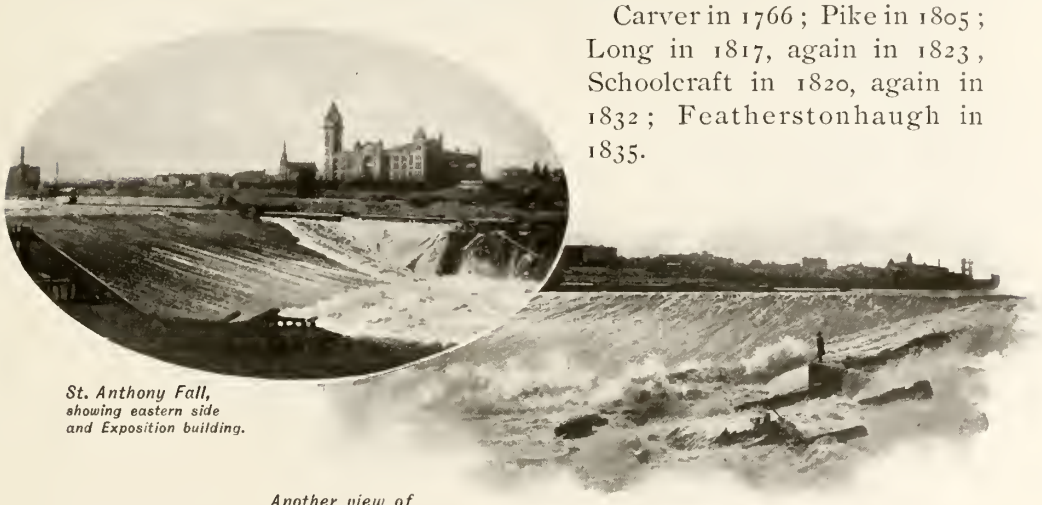
On the ducking grounds, Leech Lake Country.

of Padua, who figures extensively in his narrative. As Hennepin was passing the cataract several Indians were there, and one of them, perched in a tree overlooking the turbulent water, was haranguing the Spirit of the waters.

St. Anthony fall has always been a noted spot among the explorations of the Northwest. After Hennepin, in 1680, it was visited by many explorers who recorded descriptions, and many of whom left sketches of it. Prominent among these wilderness trailers were :

Carver in 1766 ; Pike in 1805 ; Long in 1817, again in 1823, Schoolcraft in 1820, again in 1832 ; Featherstonhaugh in 1835.

St. Anthony Fall, showing eastern side and Exposition building.



Another view of St. Anthony Fall at present time.

From the notes of these men and others connected with them, added to recent knowledge of the fall, Prof. N. H. Winchell, Chief of the Minnesota State Geological Survey, has been able to tell the geological story and to compute the approximate annual recession of the fall. The cataract was first established at Fort Snelling, at the junction of the Mississippi and Minnesota rivers. The average annual rate of recession has been about five and one-half feet, and the time required to eat out the gorge between Fort Snelling and Minneapolis, and thus carry the fall up the stream that distance — between eight and nine miles — is nearly 8,000 years.

The descriptions and drawings of these explorers show that there have been great changes in the superficial appearance of the cataract.

The remnant of the island which divided the fall when Hennepin saw it can now be seen hundreds of feet below the fall.

As is usual, time and man have worked great changes here. The government has improved this fine water-power, so that its potential utility in Hennepin's time has become a practical fact, and its magnificent economic possibilities were the initial factor in the upbuilding of Minneapolis, one of the finest cities in the West and known wherever flour is sold and bread eaten.

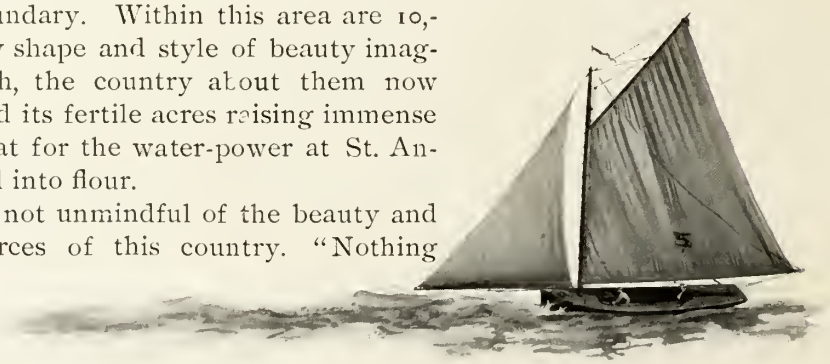
Armory at University of Minnesota.

Minneapolis, Minn.

In the curbing and controlling of the 35,000 horse-power found here, the natural beauty and surroundings have been, practically, sacrificed. The former ragged irregularity of the fall has vanished and the western bank of the river is lined with mammoth stone flouring mills, the whirr of whose machinery is silent neither day nor night.

That part of Minnesota wherein Hennepin traveled, above St. Anthony fall, is part of the Lake Park region whose beauties of water, soil, and prairie have been the theme of all explorers and travelers. It is the garden spot of the State. St. Paul, Minneapolis, and Stillwater lie at its eastern edge, and "The Undine Region," as Nicollet — 1836–1843 — called the country south of the Minnesota river, and which might appropriately be applied to all of the lake country, extends northwestward nearly to the western line of the State and northward well up to the boundary. Within this area are 10,000 lakes, of every shape and style of beauty imaginable, full of fish, the country about them now thickly settled and its fertile acres raising immense quantities of wheat for the water-power at St. Anthony fall to grind into flour.

Hennepin was not unmindful of the beauty and prospective resources of this country. "Nothing



On White Bear Lake, near St. Paul.

Rapids in the Upper Mississippi

is wanting that is necessary for life," he writes; he mentions the vast forests to be cleared and the game to be found in their depths, the fish that inhabit the "countless lakes, rivers, etc.," the fertility of the soil, producing Indian corn, French wheat, turnips, melons, squashes, cabbages, and other vegetables. He says "beautiful prairies are discovered as far as the eye can see," and remarks upon the mines of copper, iron, coal, and slate to be found. Among his discoveries, "frogs are seen there, too, of strange size, whose bellowing is as loud as the lowing of cows."

It is a trifle uncertain, perhaps, in just what latitude and longitude these bovine frogs were seen, as his various descriptions cover a wide range of *La Louisiane*, as this region of Illinois, Wisconsin, Minnesota, etc., was called.

The worthy Father was adopted as a son by a chief, but he did not relish the relationship. He carried on, to some extent, his religious ministrations; shaved the tonsures of the young Indians; made himself fairly useful, compulsorily perhaps, and seems to have observed Indian habits and life to some purpose, as his Indian vocabulary and interpretations appear to have stood the test of nineteenth century criticism.

Mille Lac or Lac Buade is one of the three largest lakes in Minnesota. It is in the heart of the eastern part of the Lake Park region, in the angle formed by the junction of the Northern Pacific

Minneapolis and St. Anthony in 1857.

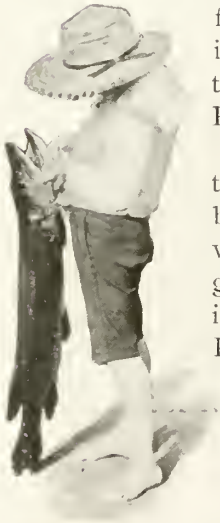
At Lindstrom, on Chisago Lake.

In the Leech Lake country.

A catch of black bass at Balsam Lake.

In the Lake Park country.

Rapids of St. Croix, at Taylor's Falls.



A sample of fish in Reno Lake, Deerwood.

main line from St. Paul and Minneapolis with the line from Duluth and the Superiors at Brainerd, and nearly in the center of the irregular triangle formed by those two lines and the "Duluth Short Line" of the Northern Pacific, extending direct from St. Paul to Duluth.

This lake was, apparently, a seat of authority among the Sioux Indians at the time that Hennepin was forcibly compelled to reside there. In 1679 Du Luth had visited the Sioux at this same spot, and mentions "the great village of the Nadoecioux called Izatys" which, it now seems to be agreed among investigators, was Kathio, which indeed Du Luth calls it in another communication. While the Lake Park region has become a thickly settled one, a veritable lake and summer resort

Interior of Observation Car of "North Coast Limited," N. P. R.

Parlor Car, 'Lake Superior Limited," Duluth Short Line of N. P. R.

Interior of N. P. R. Tourist Sleeping Car.

Standard Dining Car, N. P. R.

for the most part, the immediate vicinity of Mille Lac retains largely its primeval character. The lakes of Minnesota are noted for their fine bass, pike, and pickerel fishing; this lake has, as well, a reputation for the large number of gamy muskalonge found in its waters, as has also Leech lake farther north.

This Park region is really one vast fishing preserve, carefully watched over and exploited by the State of Minnesota. Convenient to the stations of the Northern Pacific throughout it, there are hotels and boarding houses for the accommodation of summer boarders and tourists. Small game is abundant, and deer and bears can still be found. The scenic beauties of hill and prairie are as entrancing as they were in the days of Hennepin and his successors in exploration.

It will, at first thought, create surprise in these latter days that Hennepin made no mention of Minnehaha fall, passing as he did, the mouth of the creek which plunges over it, and within a short mile of it. In the popular mind this utterly eclipses the St. Anthony fall, but there can be no doubt that, in its wild, natural state, the latter was infinitely finer than Minnehaha. Minnehaha was known to the early settlers as the Little fall, and seems to have attracted no notice from explorers or any one else, until Longfellow immortalized the inferior though dainty, beautiful fall, in his "Hiawatha." Even if Hennepin had seen it or heard of it from the Indians, it would have made no such impression as St. Anthony fall did. Over one poured the waters of a mighty river; down the other tumbled an insignificant creek.

Minnesota has wisely commemorated its early explorers and commonwealth builders in the nomenclature of its counties and towns. Hennepin's name has most appropriately been given to that county in which lies St. Anthony fall, which gave name to the old town of St. Anthony, now a part of Minneapolis, the largest city in the State. The roving friar's name will at least endure as long as do the cataract, county, and State.

St. Anthony Fall and Flouring Mills, from east side of river.

THE extinction of one of the branches of the human family should have an interest for mankind aside from a purely ethnological one. We all belong to the brotherhood of man, though there may be several marked divisions in the human strata, and we can hardly be insensible to the erosion and removal of one part of the series even though it may be an inferior one. The gradual disappearance — for such on the whole seems to be the fact — by death and amalgamation, of the North American Indian from the great hunting grounds which once knew him alone as lord and master, can hardly fail to interest us. And especially is this true in regard to a tribe that history has marked with distinction. Such a tribe is the Mandan, a remnant of which still exists on the upper Missouri river in North Dakota, but which is, gradually, either dying out naturally or being obliterated, as a tribe, by intermarriage with other tribes.

The first mention of the Mandans was by Verendrye, who, with two of his sons, saw them on the Missouri in 1738, and evidently near where Lewis and Clark found them in 1804. Again in 1742, the sons left the Mandan towns on what is now assumed to have been the first

"Legging," a Mandan, telling of the olden times.

expedition to attempt to explore the Rocky mountains. David Thompson visited them in 1797 and Alexander Henry the younger was among the Mandans in 1806; George Catlin, the celebrated Indian painter and collector of Indian handiwork, visited them in 1832; Maximilian, Prince of Wied, a German, with Bodmer, an artist, described and painted them in 1833, and others have added to the literature of the subject. These Indians were well known to the Northwestern fur traders in the period centering around the year 1800.

Lewis and Clark were really the discoverers of the Mandan Indians, so far as general knowledge of them went, and they established their winter's camp of log huts in 1804–5 near the Mandan towns, called it Fort Mandan, made a study of the Mandans and what might almost be termed confederated tribes, and in their report gave them great prominence. There can be little if any doubt that Catlin and Maximilian were led to visit these tribes by the interest excited by the narrative of Lewis and Clark. There were good reasons for this interest and for the expeditions of Catlin and Maximilian. The Mandans were not like the other plains Indians — hostile, nomadic, improvident, etc. It has been their boast that, like the Flatheads, the blood of the white man has never been spilled by them. They lived in stockaded villages of earthen huts, made war on other tribes defensively only, cultivated the ground, raising corn, pumpkins, squashes, beans, etc., and were, all in all, deserving in most ways, of the high opinions formed of them by Lewis and Clark.

**A young Mandan Indian.*

In a rough way these Mandans were, probably,

*From "Travels to the Interior of North America in 1832-3-4." By Maximilian, Prince of Wied, 1843.

*The interior of the hut of a Mandan Chief.

more nearly comparable to the peaceful, town-living Pueblos of the Southwest than any others of the tribes.

The feature which at once segregated them, in the early days, from most of the surrounding plains tribes was the nature of their houses and their concentration in fortified villages. Their huts were constructed of earth, were polygonal in shape, with sloping roofs, having, as in the skin or canvas tepee, an aperture at the top and center of the roof for light to enter and smoke to escape. They were warm, dry, many of them very large, and some of them so arranged as to house their more valuable horses as well as their own families. The huts were built close together, and the village was enclosed by a picket fortification.

All the early travelers among the Mandans particularly described these lodges, and Catlin and Maximilian depicted them in colors as well.

These lodges were usually from thirty to fifty feet in diameter, ten to fifteen feet high in the center, and about one-half that height at the eaves, and had a dirt-covered entrance, passage, or shed made from cottonwood saplings, some eight or ten feet long, four feet wide, and as high as the eaves. The framework of the house consisted of four large, stout cottonwood pillars near the center of the lodge and some twelve or fifteen feet apart, and the tops were connected by heavy beams. Around the sides or edges of the lodge smaller poles were closely and slantingly placed, the tops of which formed the eaves of the structure. Then a very natural arrangement of rafters, beams, and scantlings

*From "Travels to the Interior of North America in 1832-3-4." By Maximilian, Prince of Wied, 1843.

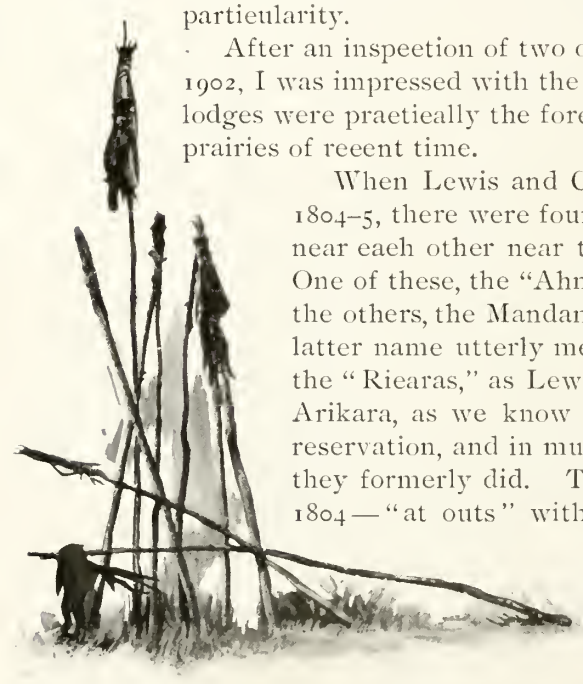
Old Mandan Earth Lodge, owned by "Kidney." The style of Mandan home in 1803.

Bird's Bill and wife, Grosventre Indians.

eompleted the skeleton of the house, both roof and sides, and finally a thiek eovering of willows, wild grass, and dirt or sod was put on and the plaee was ready for oeeupancy.

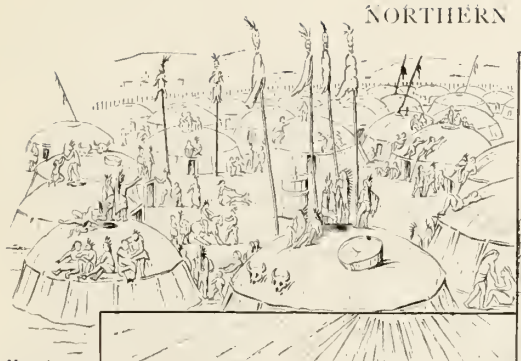
The beds were arranged about the sides in skin-eurtained aleoves or rooms, and in the eenter of the lodge was a shallow hole in the natural ground floor for the fire-plaee, and the sudatory or sweathouse was at one side of the enelosure. While the house was an irregular polygon in shape, it appeared, at a short distanee, as if it was round, and Catlin thus, on the seore of artistie lieense perhaps, so represents it in his drawings. Lewis and Clark describe these lodges briefly, but Henry — "New Light on the Early History of the Greater Northwest," edited by Coues and published by Franeis P. Harper, New York — deseribes them with partieularity.

Indian Medicine Poles.



After an inspeetion of two of these more modern earthen houses, in 1902, I was impressed with the fact that these old Mandan and Arikara lodges were praetieally the forerunners of the settler's sod house of the prairies of reeent time.

When Lewis and Clark sojourned among the Mandans in 1804–5, there were four more or less elosely allied tribes living near eaeh other near the mouth of Knife or Big Knife river. One of these, the "Ahnahaways," has gone the way of all dust; the others, the Mandans, the Minnetarees or Grosventres — the latter name utterly meaningless as applied to this tribe — and the "Riearas," as Lewis and Clark termed them, the Rees, or Arikara, as we know them, now live together on the same reservation, and in mueh the same way, in some respeets, that they formerly did. The "Riearas" were just at that time — 1804 — "at outs" with the Mandans and were living some



*A Mandan Village.

*Mandan family grouped around kettle of buffalo meat.

*Catlin feasting with Mah-to-toh-pa.

*Mah-to-toh-pa posing for Catlin in full dress.

distance down the Missouri in the vicinity of Grand river. They had lived near the Mandans before and eventually removed up the river again, peace having been made between the tribes. Subsequent to Lewis and Clark's visit the "Ricaras" were at war with the whites and were among the worst tribes to be met along the Missouri.

The strength of the tribes has been greatly lessened since Catlin's time, even. In 1837—see Schoolcraft, Catlin's "Opeeka," Chittenden's "Fur Trade of the Northwest," etc.—the smallpox was carried among them from a Missouri river steamboat, and out of 1,600 Mandans only about 31 or 32 families were left; 500 Minnetarees out of 1,000 fell victims to the pestilence, and 1,500 of the 3,000 Rees also died. The epidemic spread to the other tribes of the north, and Schoolcraft estimates that before its ravages ceased it claimed at least 10,000 victims, and Catlin and Maximilian make the number much larger. Kenneth McKenzie, of the American Fur Company, in a letter to Catlin dated June, 1839, states that there were 7,000 Crees and 15,000 Blackfeet wiped out by the disease.

*From "Catlin's North American Indians."

*A Mandan Village.

I quote from Schoolcraft:

"An eye-witness of this scene, writing from Fort Union on the 27th of November, 1837, says. 'Language, however forcible, can convey but a faint idea of the scene of desolation which the country now presents. In whatever direction you turn, nothing but sad wrecks of mortality meet the eye; lodges standing on every hill, but not a streak of smoke rising from them. Not a sound can be heard to break the awful stillness, save the ominous croak of ravens and the mournful howl of wolves fattening on the human carcasses that lie strewed around. It seems as if the very genius of desolation had stalked through the prairies and wreaked his vengeance on everything bearing the shape of humanity.'

"Another writer says: 'Many of the handsome Arickarees, who had recovered, seeing the disfiguration of their features, committed suicide; some by throwing themselves from rocks, others by stabbing and shooting. The prairie has become a graveyard; its wild flowers bloom over the sepulchres of Indians.

"'The atmosphere, for miles, is poisoned by the stench of the hundreds of carcasses unburied. The women and children are wandering in groups, without food, or howling over the dead. The men are flying in every direction. The proud, warlike, and noble-looking Blackfeet are no

*Dog Sledges of the Mandans.

* From "Travels to the Interior of North America in 1832-3-4." By Maximilian, Prince of Wied, 1843.

Interior of a Mandan Earth Lodge.
Lodge going to ruin.

Grosventre Indian Grave.

more. Their deserted lodges are seen on every hill. No sound but the raven's croak or the wolf's howl breaks the solemn stillness. The scene of desolation is appalling beyond the power of imagination to conceive.'" There can be no question, from all the reports, that this visitation was one of the most awful, widespread, decimating scourges that ever afflicted any people, not excepting the Egyptians who were made to suffer for Pharaoh's hardness of heart. And it would seem to have been possible to have prevented it.

In telling me about this scourge Two-Chiefs, an old Mandan who shows marks of the disease, stated that the Grosventres ran away when the disease appeared,—they didn't run fast enough nor far enough, however,—and that when the pestilence had run its course the Rees moved into the Mandan villages and boldly appropriated the huts and all their belongings. The Mandans were gone, wiped out, and there were none to use the dwellings or to object to such forced occupancy. Some accounts state that even the surviving Mandans were driven from their own huts. Henry, in his journal in 1806, states that the smallpox had raged among these tribes prior to that time, and it is known that it was epidemic about 1800.

In 1845 the remaining Mandans, with the Grosventre, or Hidatsa—the proper name—Indians, moved on and up the Missouri to the Fort Berthold reservation, where the Arikara subsequently joined them and where I visited them in 1902.

The monuments of these tribes, in the shape of abandoned and

ruined huts and towns, are to be found on the banks of the Upper Missouri from about Heart or Cannon Ball rivers below Mandan and Bismarck, to Knife river or beyond. The Indians seem, notwithstanding the great labor involved in so doing, to have moved quite frequently. These removals were not necessarily for long distances, and as the Sioux harassed them continually, were probably due in great

*Pehriska-Ruhpa, Minnetaree Warrior in the costume of the Dog Dance.

measure to a desire to more effectually protect themselves. In making these removals it was quite common for two small villages to combine in one at a new location. Owing to the immense difficulty of cutting timbers with their crude stone axes, in making these changes of residence they undoubtedly carried with them the timbers of the aban-

*From "Travels to the Interior of North America in 1832-3-4." By Maximilian, Prince of Wied, 1843.

*Bison and Elk on the Upper Missouri.

doned huts and used them in rebuilding, wherever possible. The Indians left Knife river because of the scarcity of timber and the attacks of the Sioux. When the trading-post of Fort Berthold — probably so called in honor of Mr. Berthold, a fur-trader of St. Louis — was established, about 1844, the Indians "drew the logs (of which it was built) with lariats of rawhide over their shoulders."

The dirt mounds, ruins of their former homes, have often been mistaken for the ancient burial grounds of these people.

South of Mandan, N. D., on the road to old Fort Abraham Lincoln, is one of these abandoned towns, and some miles north of Bismarck are two or three others.

Dr. Washington Matthews, who knows these Indians well, is an investigator of many years and an authority on the subject, states that these earth dwellings once existed throughout both the Missouri and Mississippi valleys among various tribes and families, and that all that are now known to exist are on the Fort Berthold reservation. Mrs. Baker, Two-Chief's daughter, a Mandan girl and graduate of the Indian school at Santee, Neb., who is bright and converses well in English, told me that she thought there were not more than six lodges to be found on the reservation to-day.

The Mandans, Arikara, and Grosventres have lived, more or less,

*From "Travels to the Interior of North America in 1832-3-4." By Maximilian, Prince of Wied, 1843.

as neighbors for 100 years that we know of, and a description of the Mandans applies, largely, to the other tribes. This contiguity is still seen. The Arikara or Rees occupy the lower part of the reservation on the eastern side of the Missouri river, the Grosventres, as the Hidatsa or Minnetarees are usually called, are found above the Rees, while the Mandans are almost wholly settled on the western side of the stream.

The visitor will ordinarily see little difference among these various tribes. Each, however, retains its own language, but while there are

*Indians Hunting the Bison.

some of each tribe who can not converse in the other tongues, there are many who can. Maximilian states that the Mandans are natural linguists and that, in his day, the most of the Mandans spoke the Minnetaree tongue, but that few Minnetarees could use the language of the Mandans.

There are several things that will at once attract attention. The tepee and blanket are seldom seen except, I understand, the tepee is used in summer on camping trips, and I presume the blanket is in cold weather. Good comfortable log huts have succeeded the old earth lodges and both sexes dress after the manner of white people, even, in at least some cases, to fur overcoats for the men.

They use agricultural machinery, ride about in buggies and wagons, husband and wife sitting beside each other on the seats—rather unusual among Indians—and they shelter their implements and vehicles fairly well when not in use.

They farm some, though not as much, seemingly, as I had supposed. Crops are uncertain among them and this probably is a cause of discouragement, so that I doubt if, in this respect, they have advanced

*From "Travels to the Interior of North America in 1832-3-4." By Maximilian, Prince of Wied, 1843.

Indian Scholars at Browning Indian School.

Old Timer, from Old Fort Berthold, now at Rev. C. L. Hall's Mission, on the Berthold Reservation.

Rev. C. L. Hall's Mission, Fort Berthold Reservation.

much, if any, since Lewis and Clark saw them. The Rees seem to farm more than the Mandans or Minnetarees.

Each tribe raises cattle and horses but they do not seem to grasp the idea that cattle-raising, if attended to properly, will enrich them, a scrub lean steer being as valuable in their eyes as a fat blooded one. I think that under the supervision of Major Thomas, the new agent, and Mr. Goodale, the new farmer, they will rise to a higher plane in this respect. These Indians are virtually self-supporting as they receive very little from the government.

Group of Berthold Reservation Indian Boys.

I found more Indians here, both old and young, who could talk well in English than on any reservation I have ever visited. Many of the younger generation have been to school at Carlisle, Santee, or other places, and appear to make practical use of what knowledge they have acquired.

There are five schools upon the reservation, placed at convenient points. Four of these are government schools and the fifth is a mission school under the care of the American Missionary Association of the Congregational Church. The system of instruction at these schools appears to be similar to that used in our regular public schools. An effort is also made where possible, to instruct the scholars in the practical affairs of life, the girls in various household duties and the boys in the usual "chores" incident to a large establishment. The school at the agency, the Browning boarding school, named after Ex-Commissioner Browning, accommodates about 100 pupils and is under the supervision of Mr. H. E. Wilson, a former school principal of Minneapolis. The other schools are day schools similar to our country

An Indian Ranch, Along the Missouri River near the Fort Berthold Reservation.

Congregational Church, on Berthold Reservation used by the Ree Indians.

The Agency at Elbowoods, N. D.

The Browning Indian School at Elbowoods Agency, Fort Berthold Reservation.

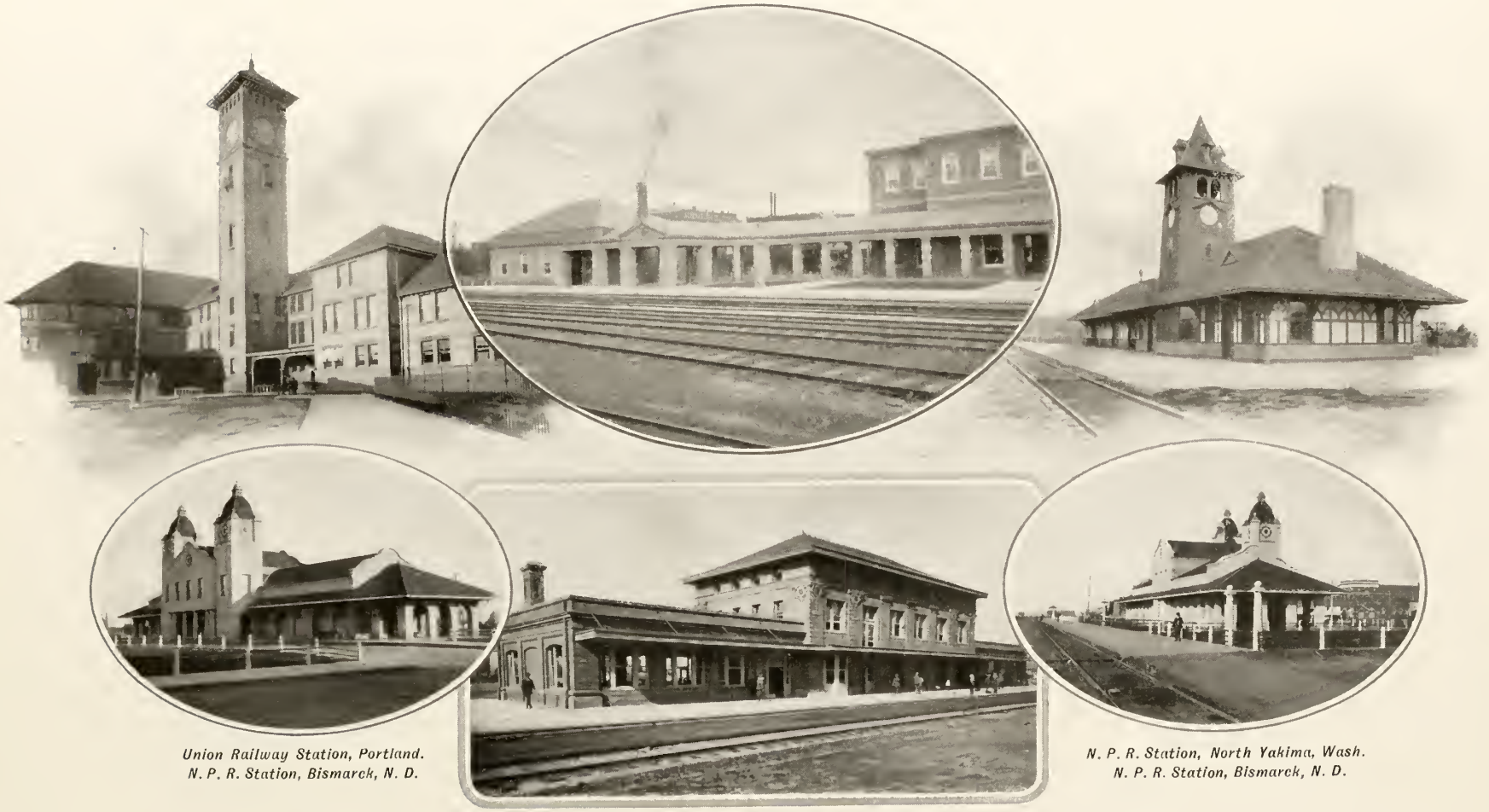
schools, and they are in charge of men who seem thoroughly interested in their work.

I asked one of the teachers if he and his family didn't get lonely sometimes, and he replied that there was so much work to do that they had no opportunity to do so. At the day schools there is less chance to teach the practicalities than at the boarding school. The latter is a new, brick, three-storied structure, steam-heated, and lighted with acetylene gas. The third story is a dormitory and the building is a school and home together.

I was in the dining-room during a dinner hour, and was surprised to see how few pupils there were who appeared to be less than full bloods. There were very few light-haired, light-complexioned youngsters, nothing like as many as I have seen at school at the White Earth, —Ojibwa— reservation in Minnesota, and at St. Ignatius Mission among the Flatheads in Montana.

The food supplied was good and wholesome and there was plenty of it, and the young Indians' table manners were as correct as white children's of the same grade and conditions.

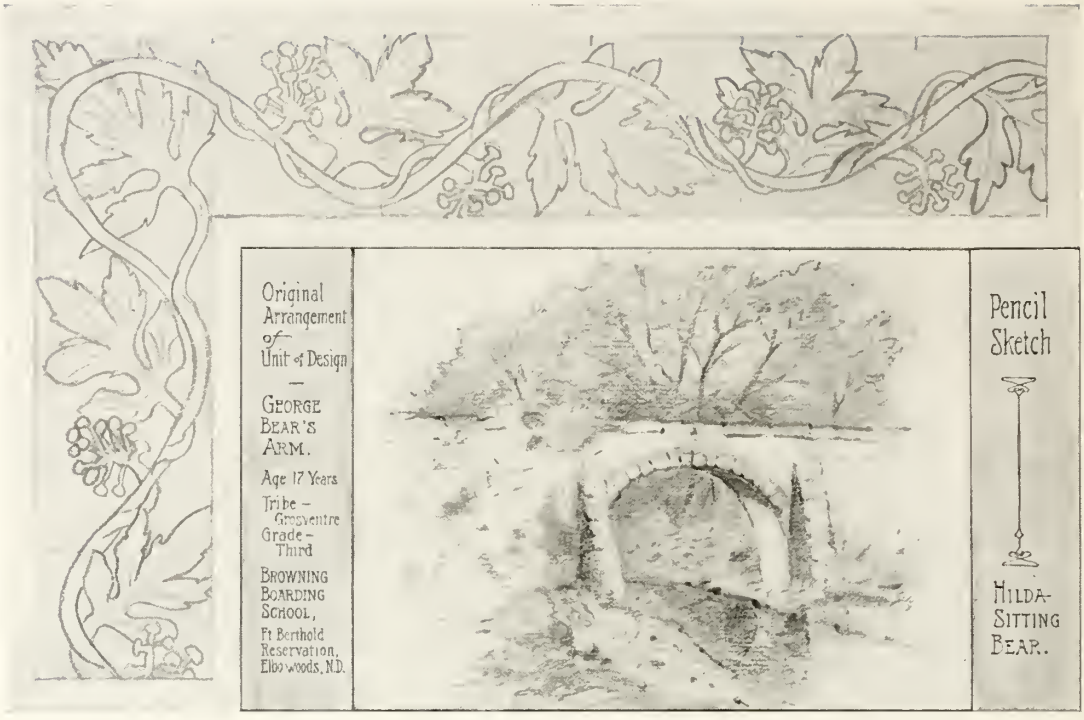
The children at all the schools appeared to be thoroughly happy



Union Railway Station, Portland.
N. P. R. Station, Bismarck, N. D.

Livingston Station, East Wing, and Lunch Room.
N. P. R. Station at Missoula, Mont.

N. P. R. Station, North Yakima, Wash.
N. P. R. Station, Bismarck, N. D.

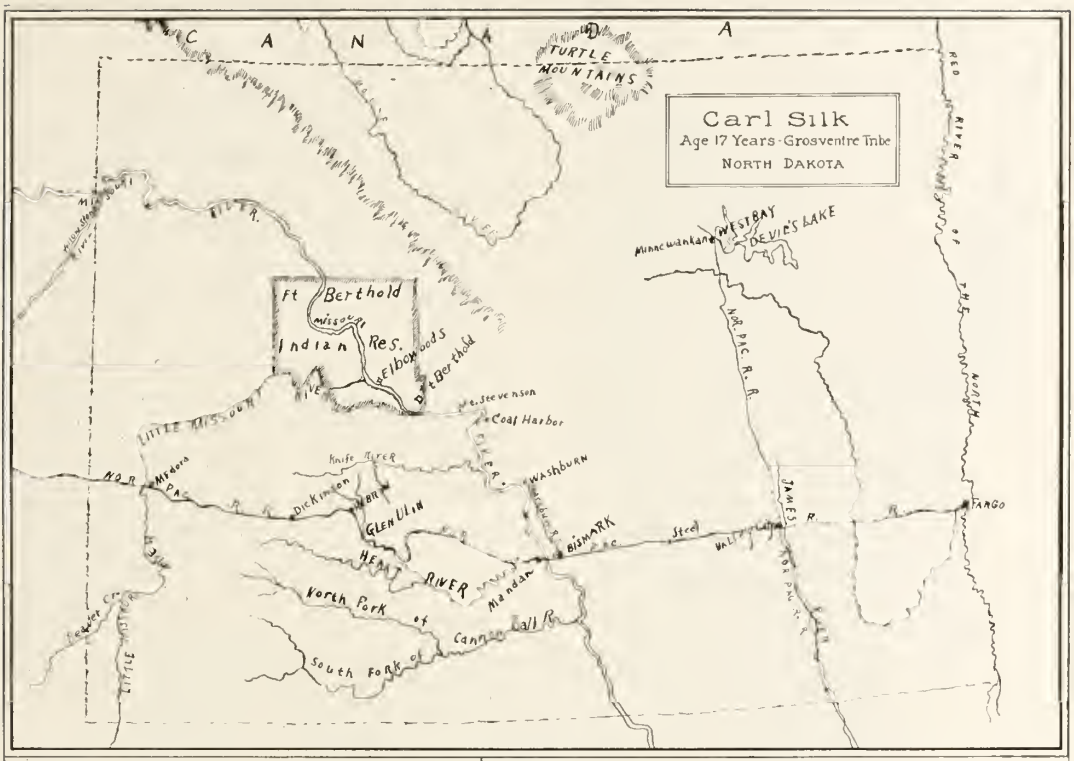


Work of Indian School Children.

and to enjoy their school life. The samples of school work reproduced here are taken at random from a collection of papers given me by Mr. Wilson, and represent work done by Indian scholars of various grades at the boarding school. They are quite suggestive of the possibilities among these people, and, I hope, will prove interesting to teachers and pupils in our public schools. In 1900 the total enrollment of school children was 275, nearly 78 per cent of the children on the reservation between six and eighteen years of age.

Mr. Wilson, who has had experience in the schools of a number of reservations, says that these Indians support the schools better than any Indians he knows of and cause no trouble whatever.

In a general way and from a moral standpoint these tribes have improved, without much doubt, since Lewis and Clark visited them. The picture which Henry draws of their immorality and looseness of conduct, particularly of the Grosventres, is simply disgusting. Lewis and Clark, Catlin, and Maximilian do not re-echo Henry's tale, but on the contrary rather praise them for their virtues and morality, particularly Catlin. Maximilian says comparatively little, but leaves it to be inferred that there might be considerable improvement in this respect. While there is still much moral laxity among some of these Indians, as is the case, with rare exceptions, with most of the tribes, no such tale can be told to-day as Henry told. For thirty years Rev. C. L. Hall has



Biography
Nathan Hale

Nathan Hale was a fine young man of twenty one who loved to study books. But he entered the army. Washington the commander in chief of the army wanted to know how many soldiers there were and how strong they were in the enemy camp.

He wanted a man to go to the British camp and Hale offered to go but his friend tried to not let him go. He said it was a dangerous thing. But he went on his own will he went across the river to the British camp and went through the camp and took account what he saw on his papers.

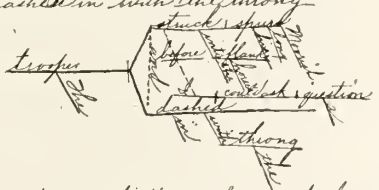
He was just making his way across the river when he was captured and his papers were found and he was hanged he said with a loud voice "I only regret that I have but one life to give for my Country"

Alfred Bear

Grammar.

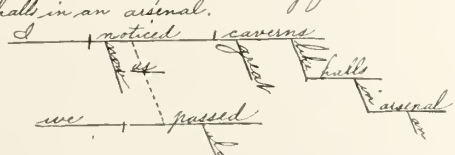
Sixth Year. Carl Silk

1. Before I could ask a question the trooper struck his long Moosh spurs into the horse flanks and dashed in with the throng.



nouns	pronouns	adjectives	verbs	adverbs	prep.	conj.
trooper	I	The	struck	in	before	and
spurs		his	could ask		into	
question		long	dashed		with	
flanks		Moosh				
throng		the				
		horse's				
		a				
		the				

I now noticed as we passed along great caverns like halls in an arsenal.



nouns	pro	adj	verbs	adverbs	prep.	conj.
caverns	I	an	noticed	now	along	as
halls	we	great	passed	along	like	
arsenal					in	

Work of Indian School Children.

*Mato-Topé, A Mandan Chief.

been laboring among these people, and he reports a decided advance in their moral tone. As is usual, their contact years ago with the soldiery at the military posts in their vicinity resulted in taint and disease, which still exists, although it was not unknown before.

Both the Congregationalists and Catholics have religious organizations on the reservation. The former have three churches, the latter a church and school combined, but unused at the time of my visit. One of the Congregational chapels is largely the work of the Ree Indians. It cost $900, and of this the Indians contributed more than one-third.

In the early days the Mandans were noted for their light and long hair and fair complexions, and this was before the white traders had appeared among them, but after the date of the Verendrye visits. The hair of the men often trailed on the ground, and both Henry and Catlin refer to this in much detail.

Now they wear their hair cut short, and in my brief visit I noticed no peculiarities of complexion or in color of hair. They all, Mandans, Arikara, and Minnetarees, seem to be a sturdy, manly set of fellows, with frank and intelligent countenances. I am inclined to think they have not had the best of supervision in the past, nor been treated with sufficient liberality and consideration by our government. Had they been somewhat more treacherous and given to forays on peaceful settlements, and to treaty-breaking after our own kind and like their enemies the Sioux, perhaps they might have fared better.

These nations, particularly the Mandans, were highly extolled by most of the earlier visitors to them, with the possible exception of Henry. Catlin was effusive in his praise, and, without doubt, overshot the mark somewhat, although both he and Maximilian appear to have found some individuals who savored strongly of the Chingachgook type of Indian and whose memories and virtues are venerated to-day. Such a man, for one, was the old Mah-to-toh-pah or Four Bears of Catlin — Mato-Topé of Maximilian — and I can easily believe that Poor

*From "Travels to the Interior of North America in 1832-3-4." By Maximilian, Prince of Wied, 1843.

Wolf, a Grosventre of to-day, now blind and infirm with the weight of his eighty-two years, has been a man that "one could tie to." In 1843 Audubon, the great naturalist, saw the Mandans and Ricarees, but he found nothing to admire in them — all the poetry about them he thought was contained in books.

Like all Indians they have their interesting traditions, and one is of a deluge, not greatly unlike our own Noahchian story.

Their ancient rites and customs have been practically supplanted through their contact with civilization, and while among them I really felt more as if I was among people of my own sort than I ever did before on any Indian reservation.

In all accounts the Mandans seem to have been in the preferred class. Their manly qualities, sobriety, etc., seem to have impressed all observers, and I imagine the same holds good to-day. Catlin says that they were known among the traders as "the polite and friendly Mandans."

"Two-Chiefs," a Mandan, being interviewed.
His daughter, Mrs. Baker, a graduate of the Santee Indian school, Nebraska, acting as interpreter.

As a pure race they are slowly but surely declining, and it will not be long before the last one will have departed for the happy hunting grounds. The reservation rolls call for 250 Mandans. Mr. Newman, a very intelligent young man, half Grosventre and half Ree, and one of the clerks at the agency, said he thought there were not to exceed 100 of them. In talking with Two-Chiefs, a real Mandan, I asked him how

many full-blood, pure Mandans he thought still remained. The old man, seventy-two years of age, stood in deep thought for several moments, and then replied, "Not more than ten families; all the others are mixed blood," and I imagine he is pretty near correct.

The Berthold reservation as it now stands is good only for stock-raising. If it is practicable to irrigate it from the waters of the Missouri it should be done, for a more ideal spot, so far as the lay of the land goes, for irrigation does not exist, and I have little doubt it would almost revolutionize the character of these Indians in a short time.

The reservation occupies both sides of the Missouri river, the mouth of the Little Missouri river touching the reservation at about the middle of the south side. It is easily reached from Bismarck, on the Northern Pacific, by the Bismarck, Washburn and Great Falls Railway to Washburn, thence driving overland, or by driving from Mandan, Hebron, Dickinson, Medora, or intervening stations on the Northern Pacific. The Washburn route via Coal Harbor, old Fort Stevenson, and old Fort Berthold, must, in summer when the vegetation is fresh and green, be extremely pleasing, as I found it full of interest in the short October days when the prairies are brown and dull.

One of the colored buttes
along the Missouri
that attracted the attention of Lewis and Clark.

NATURE'S MASTERPIECE

IT seems undoubted that there is an element of savagery in our natures. The rough, uncouth, out-of-door life of the mountaineer, hunter, or trapper finds an answering note, to a greater or less extent, in our own natures, no matter how luxurious, refined, or gentle our lives may be. If this be doubted, consider Audubon, Parkman, Tho-

reau, or the many explorers, or the men of gentle birth and breeding, of college educations, who, finding themselves cast adrift, more or less, on western plains, have quickly seized upon the adage, "When in Rome do as the Romans do," and even, oftentimes, have gone the Romans one or two better. The increasing disposition, yearly, to get away to the woods, the fields, the seashore, the lakes, the mountains, evidences the wild note in our natures, and is, as John Muir so well

White Elephant, Mammoth Hot Springs

Giant's Thumb and Liberty Cap.

Riverside Geyser.

shows, an evidence of sanity, of a wholesome regard for the true proportions of life. It is the gravel of wild life in the crop of civilization that aids digestion of the whole. Out of it all is coming a better, healthier, stronger, purer, saner, less hysterical race of beings.

As a partial result of this sanity, this yearning after mother Nature, comes the increased desire to establish national and private parks, timber reservations, zoölogical gardens, and along with it the more careful enactment of game and fish protection laws and their more thorough enforcement.

The oldest of our national parks, as well as the largest and finest, is Yellowstone National Park. This now world-known park was established early in 1872, and comprises 3,312 square miles. In 1891 a large additional area of forested country, in two rectangles, was set aside as a forest reserve. One rectangle adjoins the park on the east, the other on the south.

Stage Coaches at railway station at Gardiner, Mont.

As showing the great growth of the park idea, it is enough to state that after Congress set aside the park in 1872, it allowed it, practically, to protect itself for a

period of six years, the first appropriation to care for and improve it being made in 1878, and amounting to but $10,000. Now mark the change! In 1902 Congress appropriated $750,000, in immediate and continuing appropriations, to improve and perfect the park and to provide the proper administrative force, and this exclusive of the cost and maintenance of the soldiery quartered there.

Black Growler, Norris Geyser Basin.

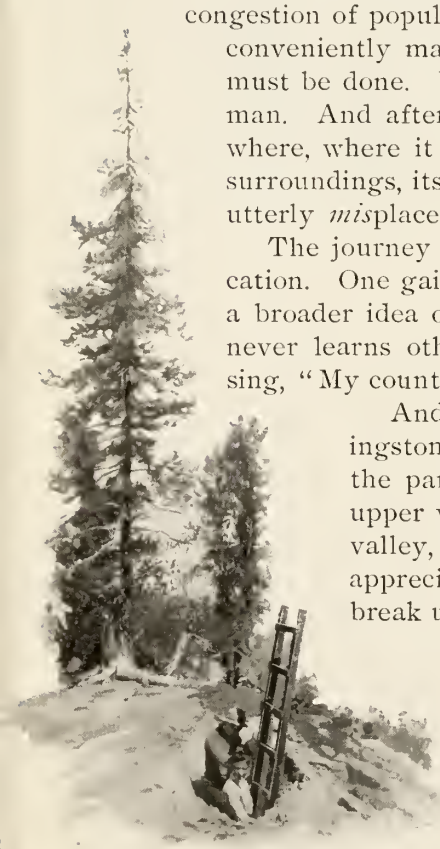
Since the setting aside of the Yellowstone Park domain Congress has wisely established several other parks covering valuable and noteworthy scenic portions of our country, to say nothing of the national battleground parks provided.

Yellowstone Park stands not only as the greatest thing of its kind in our own country, but as "the greatest thing in the world." It was a new idea, it marked a new era in national recreation and has been an example to the world.

Unfortunately for the ease and purses of many who desire to visit it, it is situated in the depths of the Rocky mountains, far from the congestion of population. This necessarily requires some planning to conveniently make the trip, but it is worth it, and at any rate it must be done. What God has thus placed may not be altered by man. And after all, who would have it otherwise? Placed elsewhere, where it would be divested of its present and appropriate surroundings, its noble grandeur, its dignified solitude, it would be utterly *mis*placed.

The journey to the park from the East is in itself a liberal education. One gains a better knowledge of one's own country, forms a broader idea of the vastness of our great domain, learns as one never learns otherwise what it means to be an American and to sing, "My country! 'tis of thee."

And when, after the fifty-four-mile approach from Livingston, on the Northern Pacific main line, to Gardiner, at the park boundary, in a luxurious Pullman through the upper valley of the Yellowstone river known as Paradise valley, one reaches the park, one is in condition to fitly appreciate the sunburst of physical glory that is about to break upon the vision and understanding.



Climbing out of the Devil's Kitchen.

Bathing Pool on shore of Yellowstone Lake.

Devil's Punch Bowl.

New Roadway at Golden Gate.

Economic Geyser.

Along the shore of Yellowstone Lake.

THE PARK ROAD SYSTEM AND TOUR.

And now let me call attention to what is soon going to be almost as remarkable a phenomenon as the geysers or springs — the roads of the park.

Congress has decreed that travel through the park must be in the good, old-fashioned way — over dirt roads; that steam or electric railways, automobiles, etc., are out of place there. These roads, then, become an important factor in the comfort and convenience of sight-seeing. It has required time to develop them, and while Congress was, for many years, very dilatory and parsimonious in affording the necessary means to care for and improve the park roads, it has recently adopted a different course.

Officers' quarters and parade ground, Fort Yellowstone, Mammoth Hot Springs.

Bit of road near Hospital, Fort Yellowstone.

Near Norris Geyser Basin.

There is a regular system of road expansion, and of late it has been energetically exploited under the general direction of the Corps of Engineers, U. S. Army, Capt. Hiram M. Chittenden immediately in charge, and as a result of the increased appropriations the roads are taking on a character totally unknown heretofore.

Briefly, the scheme of road-building is about as follows: Group together in a main thoroughfare the principal points in the park, so that in visiting them time and money are both economized. Have this main artery of travel so carried through the park that, en route from point to point, as much of the park as is possible may also be seen, and in no case the traveler be compelled to retrace any portion of it.

Obsidian Cliff and Road from south.

Then connect with these central points other and remoter ones, so that those who have the more time to spare may be able to visit them at will. This idea, in its entirety, has not yet been worked out, but it is now rapidly nearing completion, and the year 1903 will see a great gap in the chain closed, or nearly so.

The working out of this problem has been a harassing matter. Streams had to be followed and bridged, cañons traversed, hills cut away, mountains crossed. To get through Golden Gate, a cañon four miles south of Mammoth Hot Springs and only a mile

In Spring Creek Cañon.

long, meant originally a timber trestle midway of the cañon and on a heavy grade, and blasting away the side cliff to obtain width. This cost $14,000, and in 1900 it was necessary to replace the trestle by a solid steel and concrete structure, widen the roadway still more and greatly reduce the grade, and it all cost another $10,000 of Uncle Sam's money.

To engineer a road through Spring creek cañon leading up to the Continental divide, it was necessary to alter the course of the stream and provide a new channel for it where the space was, at best, only a few yards wide.

Perhaps the most exasperating feature of the problem was to make a good, solid, dustless road where the ground was of such a nature that it simply was impossible to do it. This meant that suitable material must be hauled from other places in the park, miles remote often, that would form such a road, a slow procedure and requiring time to accomplish it.

As may be imagined, this required heavy appropriations and much time and labor, but it is now being done gradually, and the roads in the park are slowly approaching a completeness greatly to be desired.

Beginning with about 1900, a vast amount of work has been done in reducing grades; widening roadbeds, shortening distances by new, cut-off roads; providing better drainage; elevating roadway above streams so that spring freshets can not damage it; riprapping where necessary; substituting steel for wooden bridges; solidifying, and improved surfacing of, roadway, and, where long ascents were necessary, establishing uniform and as light grades as possible.

An important adjunct of recent adoption is road sprinkling from heavy, wide-tired wagons. This keeps down the dust and packs and smooths the road, for which the tourist is profoundly grateful to Congress and to everybody connected with the improvement.

The more striking phenomena in Yellowstone Park follow a well-defined zone some miles wide and with an axial trend north and south from Mammoth Hot Springs. The road system, as planned, follows down one side — the western — of this zone to Upper geyser basin, crosses the Continental divide to Yellowstone lake, and then runs north along the eastern side to the Grand cañon, over the Mount Washburn-Dunraven divide to Tower fall, and thence to Mammoth Hot Springs.

Road along Gardiner River.

The only uncompleted link in this chain is from the Grand cañon to Tower fall. This has been surveyed and is in process of construction, but as it is very heavy work, requiring careful excavation and grading, on the south side of Mount Washburn particularly, it will probably be a year before the road can be continuously used.

In the meantime the road crosses the plateau from the Grand cañon to Norris geyser basin, the tourist retracing, from that point, the ingoing route.

The natural course in making the park tour is just as it has been planned and has always been made, from Mammoth Hot Springs, which is the chief point and seat of government in the park, southward through the geyser basins, across the divide and return by Yellowstone lake, the Grand cañon, etc., and the road system simply conforms to this very logical proposition.

Grotto Geyser.

In constructing the park roads the principal consideration has been *safety and comfort.* The roads are solidly built, well crowned and drained, of as light gradients as possible, bridges strong and durable, and, an important point, are built by the shortest routes consistent with safety and sight-seeing. Where, in earlier years, work was done

that was necessarily temporary in its nature, or mistakes were made, these have been or are being corrected, with the result that within two or three years — it requires time to produce a permanently good road — Yellowstone Park will have the most perfect system of roads, both in conception and real character, to be found under anything like similar conditions *in this country.*

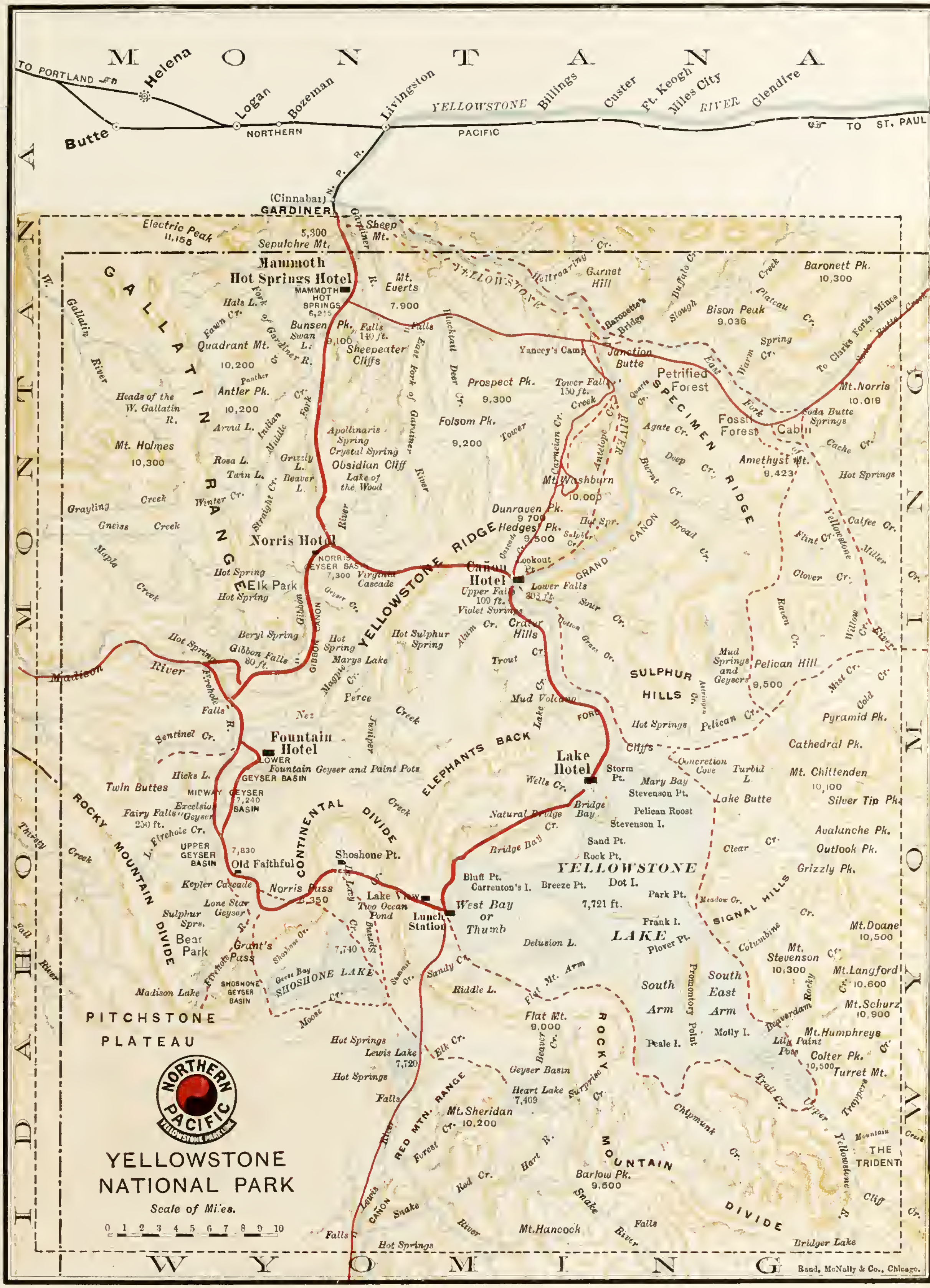
In engineering these roads it has been the aim to so locate them that the passing tourist may see quickly and without loss of time, and yet intelligently, a large number of the minor objects of interest which the park possesses. Between Mammoth Hot Springs and Norris basin, for example, there are passed Pulpit terrace, Liberty Cap, Silver Gate and the chaos of rocks round about, Golden Gate and Rustic fall, Bunsen peak, Swan valley with the encircling mountains headed by Electric peak, Willow park, Apollinaris spring, Obsidian cliff, a solid natural glass escarpment, Beaver and Twin lakes, the Devil's Frying Pan, and Gibbon river. Between Norris and Lower geyser basins, to continue the narration, the traveler enjoys a ride, first along the Gibbon river rapids, then through the cañon of the Gibbon and still alongside the river, and finally by the side of the Firehole river, a wide, swift stream fed by geyser waters and remarkable for its clarity and for its chameleon-like contrasts of color. In this riverside ride, besides the lofty, noble cañon of the Gibbon, Elk park, Beryl spring, Gibbon

The Devil's Frying Pan.

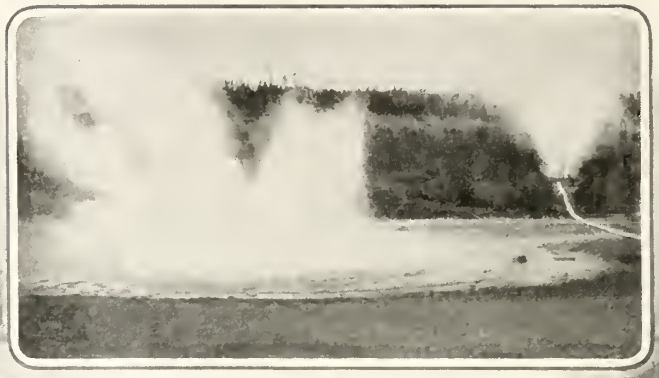
Electric Peak to the right,
And Mountains of the Gallatin Range from Swan Lake valley.

Road at Base of Obsidian Cliff.

fall, and the Cascades of the Firehole are seen. Then in the nine miles that separate the Upper from the Lower geyser basin, there is, besides the renowned Midway geyser basin, where Excelsior geyser, Turquoise spring, and Prismatic lake are found, an almost continuous line of steaming funnels or fumaroles to be seen from the road. Here



YELLOWSTONE NATIONAL PARK
Scale of Miles.
0 1 2 3 4 5 6 7 8 9 10
NORTHERN PACIFIC
YELLOWSTONE PARK LINE
MONTANA
WYOMING
IDAHO
TO PORTLAND
Helena
Butte
Logan
Bozeman
Livingston
YELLOWSTONE RIVER
Billings
Custer
Ft. Keogh
Miles City
Glendive
TO ST. PAUL
NORTHERN PACIFIC
N. P. R.
(Cinnabar)
GARDINER
Electric Peak 11,155
Sepulchre Mt.
Sheep Mt.
Mammoth Hot Springs Hotel
MAMMOTH HOT SPRINGS 6,215
Mt. Everts 7,900
GALLATIN RANGE
Quadrant Mt. 10,200
Antler Pk. 10,200
Mt. Holmes 10,300
Bunsen Pk. 9,100
Sheepeater Cliffs
Prospect Pk. 9,300
Folsom Pk. 9,200
Yancey's Camp
Junction Butte
Baronette Pk. 10,300
Bison Peak 9,036
Petrified Forest
SPECIMEN RIDGE
Fossil Forest
Cabin
Mt. Norris 10,019
Amethyst Mt. 9,423
Tower Falls 150 ft.
Mt. Washburn 10,000
Dunraven Pk. 9,700
Hedges Pk. 9,500
Apollinaris Spring
Obsidian Cliff
Lake of the Wood
Norris Hotel
NORRIS GEYSER BASIN 7,300
Virginia Cascade
YELLOWSTONE RIDGE
Cañon Hotel
Upper Falls 100 ft.
Lower Falls 308 ft.
GRAND CAÑON
Crater Hills
Hot Sulphur Spring
Elk Park
Gibbon Falls 80 ft.
Madison River
Firehole R.
Fountain Hotel
LOWER GEYSER BASIN
MIDWAY GEYSER BASIN
UPPER GEYSER BASIN
Old Faithful
Kepler Cascade
Norris Pass 8,350
Twin Buttes
Fairy Falls 250 ft.
CONTINENTAL DIVIDE
ROCKY MOUNTAIN DIVIDE
Shoshone Pt.
Lake View
Two Ocean Pond
Lunch Station
West Bay or Thumb
Lake Hotel
ELEPHANTS BACK
SULPHUR HILLS
Mud Volcano
Pelican Hill 9,500
Pyramid Pk.
Cathedral Pk.
Mt. Chittenden 10,100
Silver Tip Pk.
Avalanche Pk.
Outlook Pk.
Grizzly Pk.
SIGNAL HILLS
Mt. Doane 10,500
Mt. Stevenson 10,300
Mt. Langford 10,600
Mt. Schurz 10,900
Mt. Humphreys
Colter Pk. 10,500
Turret Mt.
THE TRIDENT
YELLOWSTONE LAKE 7,721 ft.
South Arm
South East Arm
Promontory Point
SHOSHONE LAKE 7,740
Grant's Pass
Bear Park
PITCHSTONE PLATEAU
Lewis Lake 7,720
Heart Lake 7,469
Mt. Sheridan 10,200
RED MTN. RANGE
ROCKY MOUNTAIN DIVIDE
Barlow Pk. 9,500
Mt. Hancock
Snake River
Bridger Lake
Rand, McNally & Co., Chicago.



In Norris Geyser Basin, "Constant Geyser" and "Black Growler."

View of the Terraces.

Silver Gate, Mammoth Hot Springs.

Road in Gardiner Cañon.

Tourists walking on Geyser Biscuits.

Crater of Excelsior Geyser.

Mammoth Paint Pots, Midway Geyser Basin.

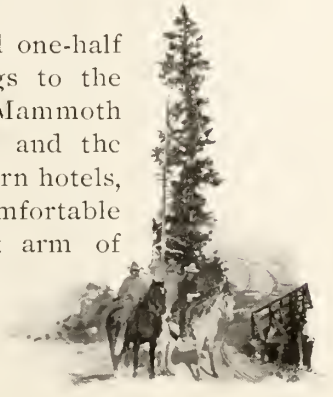
we are quite close to the axis of thermal action in the park, and we discern its evidences on either side as we ride along.

The ride across the Continental divide from the Upper basin opens up a new order of scenery. One is in a state of constant expectancy, for at nearly every turn of the road a new vista breaks upon the view. At Keppler cascade, just beyond the Upper basin, the Firehole river tumbles over a black lava incline, almost a precipice, in a thousand threads and channels of gliding foam, down into a dark, solitary dell whose rocky sides are forever moistened by the spray, and where the sun's peeping rays linger but for a brief hour or two each day. Through the thick forest, whose umbrage is usually quite welcome, the coach-and-four creeps, now climbing upward, now descending, and again swinging around a headland where a wide sweep of wildness is revealed. Such a place is Shoshone point. The carefully engineered road climbs the mountain-side by an easy approach so that, until the coach stops full upon the wide platform excavated at the extreme promontory of the mountain, the occupant does not quite grasp either visually or mentally what so suddenly breaks upon him. Mountain, timber, ravine, meadow, and lake in rare and beautiful arrangement, form a broad and stirring landscape near at hand. Beyond, miles away, rise three sober, immaculate, eternally snow-white and clean-cut peaks, the great landmarks of the central Rockies, the Three Tetons. The bringing of the road to this point was a noble conception, admirably executed. The accented parts of the picture are the Tetons, afar off, and Shoshone lake nearer at hand. Photography, except that of the mental sort, can not grasp the scene in its unfading grandeur. It is strange that no painter seems to have yet tried to work it into an immortal canvas.

In skirting Yellowstone lake the road furnishes a variety of pleasing scenes, and between the Lake hotel and the Grand cañon there are Yellowstone river, Mud volcano, Hayden valley, Crater hills or Sulphur mountain, the Yellowstone rapids, the Upper fall, and a glimpse of the wonderful cañon, the finest thing in the park and in the world, of its size and kind.

Nearly everything thus enumerated may be seen from the coach In two or three instances, descending from the vehicle and walking a few steps will add very much to the pleasure and effect of the view.

The park tour, as here indicated, occupies five and one-half days from the time of leaving Mammoth Hot Springs to the return to that point. The tourist is housed and fed at Mammoth Hot Springs, Lower geyser basin, Yellowstone lake and the Grand cañon, in steam-heated, electric-lighted, and modern hotels, and the noonday lunches en route are provided at comfortable lunch stations at Norris geyser basin and the west arm of



Yellowstone lake. At Upper geyser basin a hotel camp in canvas tents is maintained for the present. The tents are shaded and comfortable and heated by stoves.

At Mammoth Hot Springs there are to be seen, besides Fort Yellowstone, the seat of authority in the park, Liberty Cap, the beautiful terraces and hot springs, Orange geyser, the Giant's Thumb, etc.; at

Castle Geyser, Upper Geyser Basin.

The Cone of Giant Geyser, Upper Geyser Basin.

Looking into the crater of Old Faithful.

Grand Geyser, Upper Geyser Basin.

Turquoise Spring, Midway Geyser Basin.

Lower geyser basin there are the two magnificent Fountain geysers, the Paint Pots, of popping hot, delicately tinted clay, many hot springs, and—the bears, which flock about the refuse piles near the hotel, afford infinite interest and amusement to the guests, and are harmless unless bothered by the latter. At Upper geyser basin the big geyser fellows are seen—Old Faithful, Grand, Riverside, Giant, Bee Hive, Lion, and others. Here, too, are Morning Glory, Emerald, and Sunset pools, each different from the others and all beautiful beyond the power of words to describe. At this point the geyser phenomena reach the maximum of development of all places in the world, and

this restricted, hidden valley among the Rocky mountains is the most wonderful spot of its kind the earth over.

ROARING MOUNTAIN.

Fifteen miles from Mammoth Hot Springs the coaches and tourists south-bound pass a hill to the left, which, in 1902, was of marked interest. It is Roaring mountain. For years it has been a minor attraction, with very small quantities of steam issuing therefrom. On its surface it showed the peculiar baked appearance seen at all the hot springs deposits, but otherwise was not noticeable save that it did not roar, as its name indicated that it should.

In 1902 this state of affairs had changed. Instead of silence and quiescence, noise and activity were found. It was now Roaring mountain in fact as well as name. On a quiet day the sound of escaping steam could be heard long before the mountain appeared.

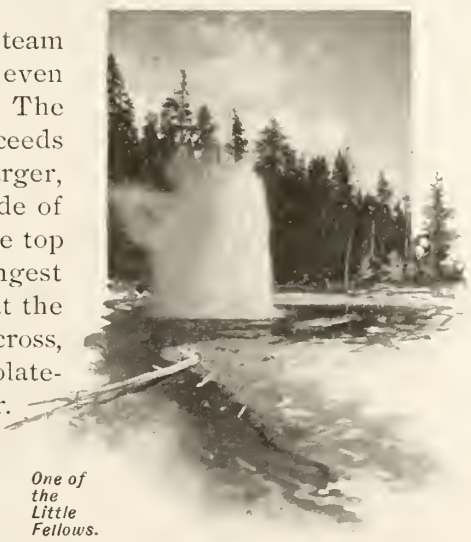
Stopping over night at Norris geyser basin, I started on my return to Mammoth Hot Springs, after a tour of the park, early in the morning. As we reached Roaring mountain the atmosphere was filled with masses of steam varying from a tiny jet to huge clouds from the larger orifices.

Leaving the surrey, I climbed to the summit of the hill, several hundred feet, and was well repaid for my toil.

The region comprises a much more extended area or basin than can be seen from the road, and covers the mountain slope on both sides of a ravine. There can now be little doubt that at some past time the place has been one of considerable activity, much more so than has heretofore been supposed, but probably not covering so wide an area as now. The hill is baked and cooked so that over most of it all vegetation is gone. At some spots there are a few pines, and considerable quantities of a coarse moss-like growth are found at favorable places, grown, perhaps, since the last period of activity.

There are, literally, thousands of steam vents, ranging in size from an inch, or even less, to ten and fifteen feet in diameter. The loud, continuous roar which is heard proceeds almost entirely from two openings, the larger, about a foot in diameter, on the south side of the ravine and fifty feet or more from the top of the hill. What seemed to be the strongest and loudest blast came from an orifice at the very summit not more than six inches across, and by its side was a boiling vat of chocolate-colored mud about three feet in diameter.

The time of day was most propitious



One of the Little Fellows.

Elk and Buffalo in Yellowstone Park.

Deer roaming in Yellowstone Park.

Bruin at Meal Time.

for seeing the finest effects produced by the steam. The sun had not yet warmed the atmosphere and the condensation was perfect, making a beautiful display. There was a good deal of moisture as one got into the thick of it all, and I was blinded by the steam many times and compelled to grope my way carefully. The ground was caved, broken, soft, disintegrated and full of holes, and care was necessary not to make missteps that might prove unfortunate. The ground was also very warm, so that in continued walking about the feet were warmed and the warmth was instantly perceptible to the bare hand. Here and there were found pure sulphur crystals from an inch to several inches in size, and the odors of sulphur, steam, etc., peculiar to these places, were distinctly noticeable.

About two-thirds down the mountain, and well down in the ravine, a small, clear stream of warm water issued from a little cave-like opening and flowed on down the slope and across the roadway into the flat beyond. The changes at this point are typical of those occurring yearly in the park. One spot may lessen in activity and another increase, but the general average is maintained.

If Roaring mountain be as active in 1903 as in 1902, it will certainly repay the exertions of the student of such phenomena to clamber up its ash-colored sides and to breathe its hot odoriferous vapors.

YELLOWSTONE LAKE.

The position of Yellowstone lake in the park tour is a most happy one. Following the gush and excitement as well as novelty of the geyser basins, it soothes the spirit, calms the mind, and produces a feeling of rest and tranquillity. Hemmed in by mountains

"Oh, how I love you!"

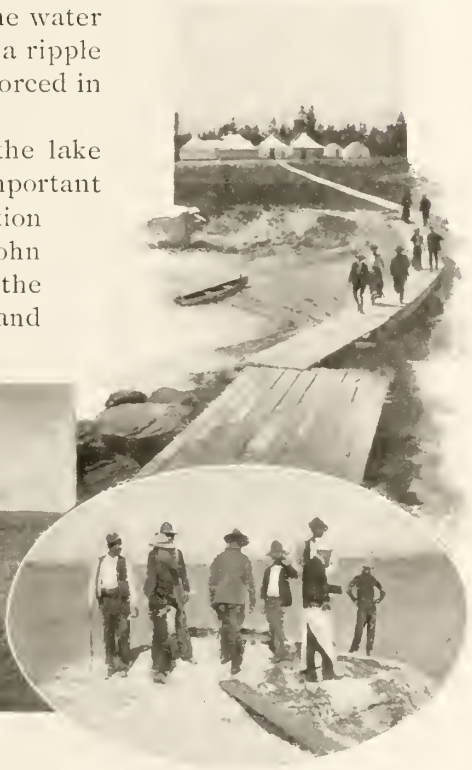
whose timbered slopes, on the east, break back upon the high, bare, rocky, serrated peaks of the Absaroka range, diversified by islands, its shore line a most irregular and indented one, it is not only a beautiful sheet of water, but it adds a needed and most acceptable variety to the marvelous scenery of the park. Its elevation, 7,721 feet, and its being navigated by a steel steamer built in the Mississippi valley and transported across prairies and mountains to its mountain-girt sea, gives still an additional interest and attraction to it.

From my window in the Lake hotel, near where Yellowstone river leaves the lake, the water spreads out of sight to the east and west, and it extends away southward into the heart of the Absarokas. For all the motion there is to the water it might be a sea of glass or silver. Scarcely a ripple disturbs its surface, and rest and repose are forced in upon one whether or no.

Lunch Station at west arm of Yellowstone Lake and walk to Steamer Landing.

The names of prominent objects about the lake bring to mind those who have borne an important part, long ago, in the discovery and exploration of the region. Colter peak immortalizes John Colter, the trapper and explorer, who was the first white man to see the park; Stevenson island

Steel Steamer Zillah, Yellowstone Lake.



Hot Spring Cone, Yellowstone Lake.

and Mount Stevenson were so named after James Stevenson, now dead, of the old Hayden survey; Mount Doane brings to mind Lieut. G. C. Doane, who visited the park in 1870, and who wrote one of the most perfect descriptions of this weird land that has ever been penned; Mount Sheridan, to the south, commemorates Gen. Phil. Sheridan, who explored the region first in 1876, and who was always one of its staunch friends; Mount Langford, near Mounts Doane and Stevenson, was named after N. P. Langford, of St. Paul, Minn., one of the Washburn-Doane party of 1870. Other peaks are named after physical characteristics, as Turret and Table mountains, Cathedral peak, etc.

Bridge Bay and Mount Sheridan from Elephant Back, behind Lake Hotel.

The lake is important in an historical sense, in connection with the region. Colter explored its shores in 1807, the Washburn-Doane party in 1870. It was in 1870 that Everts, one of the latter party, lost his way on the southern shore and wandered for thirty-seven days, living on roots and berries, and was finally found just in time to save his life, between the Grand cañon and Mammoth Hot Springs. The lake was known as Lake Eustis in very early days.

About its shores are found much of the phenomena common to the park — hot springs, fumaroles, mud springs, etc. At the lunch station at west arm of the lake there are some fine paint pots and the now well known hot spring fishing cone.

The first view of the lake, as the tourist approaches from the geyser basins, comes suddenly and is a most beautiful one. From an elevated plateau, the lake, far below, bursts upon the sight in all its entrancing loveliness. A large expanse is visible, and whether it be in storm or calm it is a gem picture for memory to treasure.

As the lake restores one to a normal equilibrium after the geysers have tended to accelerate the pulse-beats, so also it prepares one for the glory, dignity, uniqueness, and grandeur of the Grand cañon with its Upper and Lower falls.

More startling contrasts than the geysers, lake, and cañon may hardly be found, and the lovely, restful lake, coming between the geysers and cañon, performs a most useful and effective office.

The trout-fishing in Yellowstone lake is something phenomenal. The lake abounds in salmon trout that can be taken very easily by casting. Even the tyro can catch trout here, and all are free to do so.

Golden Gate Road, looking eastward from entrance to Cañon.

THE GRAND CAÑON AT EVENING.

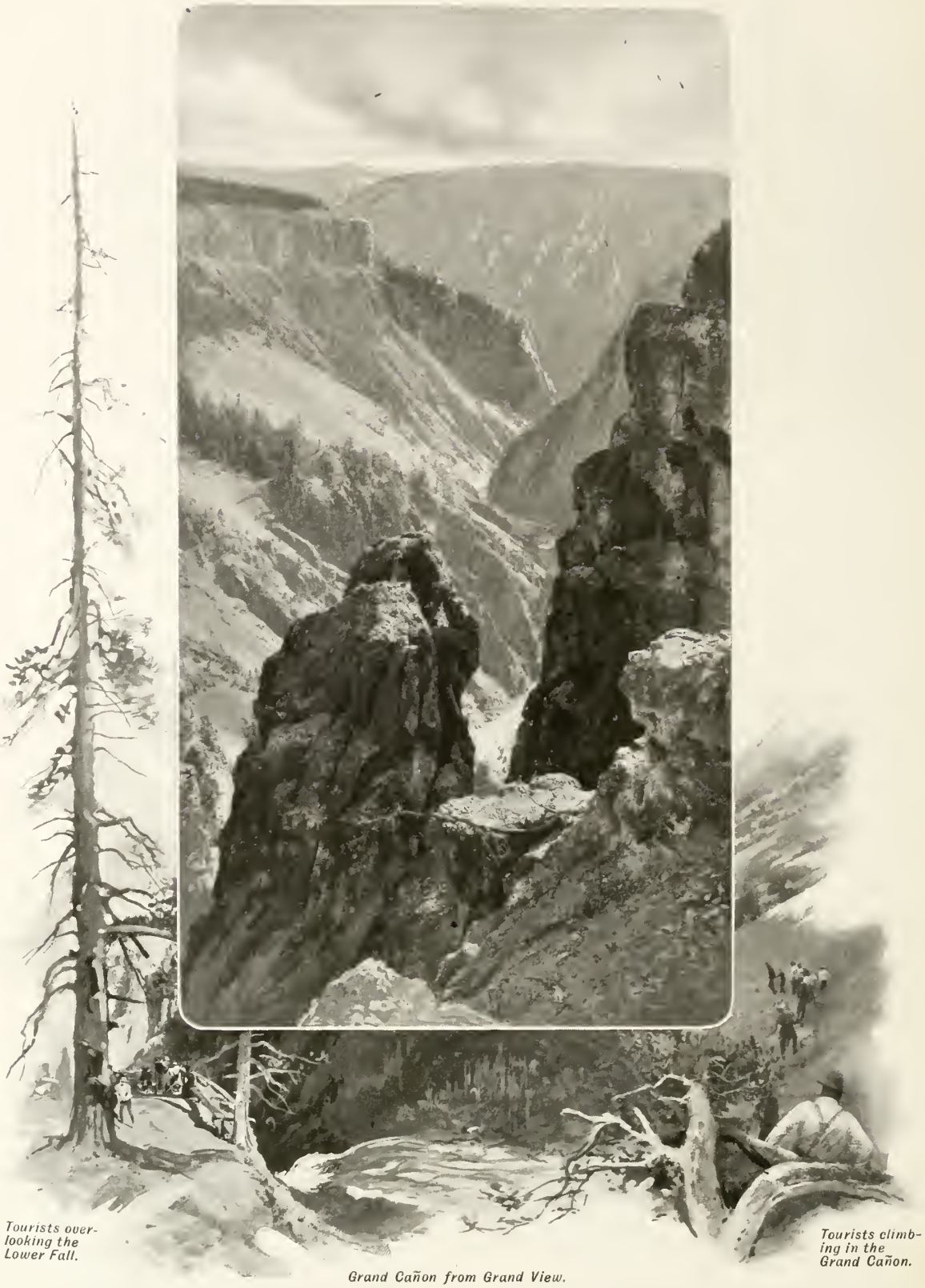
The most pronounced feature of the park is the Grand cañon. On this point there are no two opinions.

Even the chronic fault-finder — and he does find his way here — is hushed to silence when he views this, and he has no criticisms to make upon the Almighty for His work at this point.

As the coaches from the lake reach the cañon they suddenly emerge from the trees and come into full view of the gorge at its head and high above the Lower fall. It is a time for silence, and only awe-hushed exclamations are heard from the surprised and startled tourist. It is impossible for one to be prepared for what one sees here, unless a previous experience so qualifies one. And yet, unless the day be cloudy, it is not the best time to view the scene, as the sun, at its zenith, shines down impartially upon both walls, flooding them with light and blotting out, to a large extent, all detail. After luncheon at the hotel, however, when the tourist goes forth to see and study this transcendent work of Deity, the conditions have changed and one wall is then bathed in sunshine, the other draped in varying shadows. Then the lines and angles, widths and depths, heights and distances, curves, walls, towers, pinnacles, colors, the tremendous fall more than 300 feet in height, the inequalities and beautiful sinuosities of the noble stream that thunders along at the foot of the chasm, are brought out in all their completeness of detail and harmony of relation. As the wonder-struck mortal wanders along the cañon's brink he finds that it is sensation following sensation, glory piled on glory, and by the time Inspiration point has been reached his cup is filled to overflowing.

The Heart of the Grand Cañon.

The cañon changes much with the varying lights and hours of the day. In 1902 I had ridden in a surrey to view the splendid new road being constructed over the Washburn-Dunraven divide, and which is to open an entirely new and glorious stretch of country to travel. It was dusk as we returned, and when not far from the hotel we came upon a young, innocent, and fearless deer eating by the roadside. We stopped the horses, but the beautiful creature evinced not the least concern save an innocent wonderment, and continued her feeding. Just as we started on, lo! in the roadway a little distance ahead, a dark, chunky shape made known a bear. We again stopped. Bruin also halted, looked at us for a moment and then turned into the timber, and as he came into view sidewise we saw that it was a big grizzly. When we reached the spot where he had vanished, a keen scrutiny failed to detect his presence near by.



Tourists overlooking the Lower Fall.

Tourists climbing in the Grand Cañon.

Grand Cañon from Grand View.

Lower Fall of Yellowstone, 308 feet high

Grand Cañon Hotel, Yellowstone Park.
The Yellowstone Rapids above the Upper Fall.

Upper Fall of Yellowstone, 109 feet high.

I wanted to see the great chasm at eventide, and as we neared the hotel we drove on and out as far as Grand View. Here, clambering out to the point which overlooks so wide a portion of the gorge, and almost overhangs the abyss, we looked out upon the matchless and now somber scene. It was a revelation. The light and fire of the sun-god was entirely gone; dark and holy shadows like mammoth draperies hung adown the walls; the accentuation of depths, slopes, and angles was acute and startling; the minarets, obelisks, towers, and castellated ridges which were thrust upward or outward from the walls, while shrouded in gathering gloom were acutely outlined and were drawn closer; the forests above the walls were black and gloomy, the walls below them strikingly sheer and massive; the stream at the bottom deeply and somberly green with flashes of foam and spray, and the colors, while here and there dull, and, as a whole, most delicately softened and subdued, were as clear and distinct as possible.

It was a memorable scene that we overlooked, and it was repeated and perhaps in some ways intensified at Point Lookout, where the grandeur and individuality of the Lower fall was an added feature.

This is but one picture of the cañon. Almost every hour of the day has its own story and picture to tell and to see.

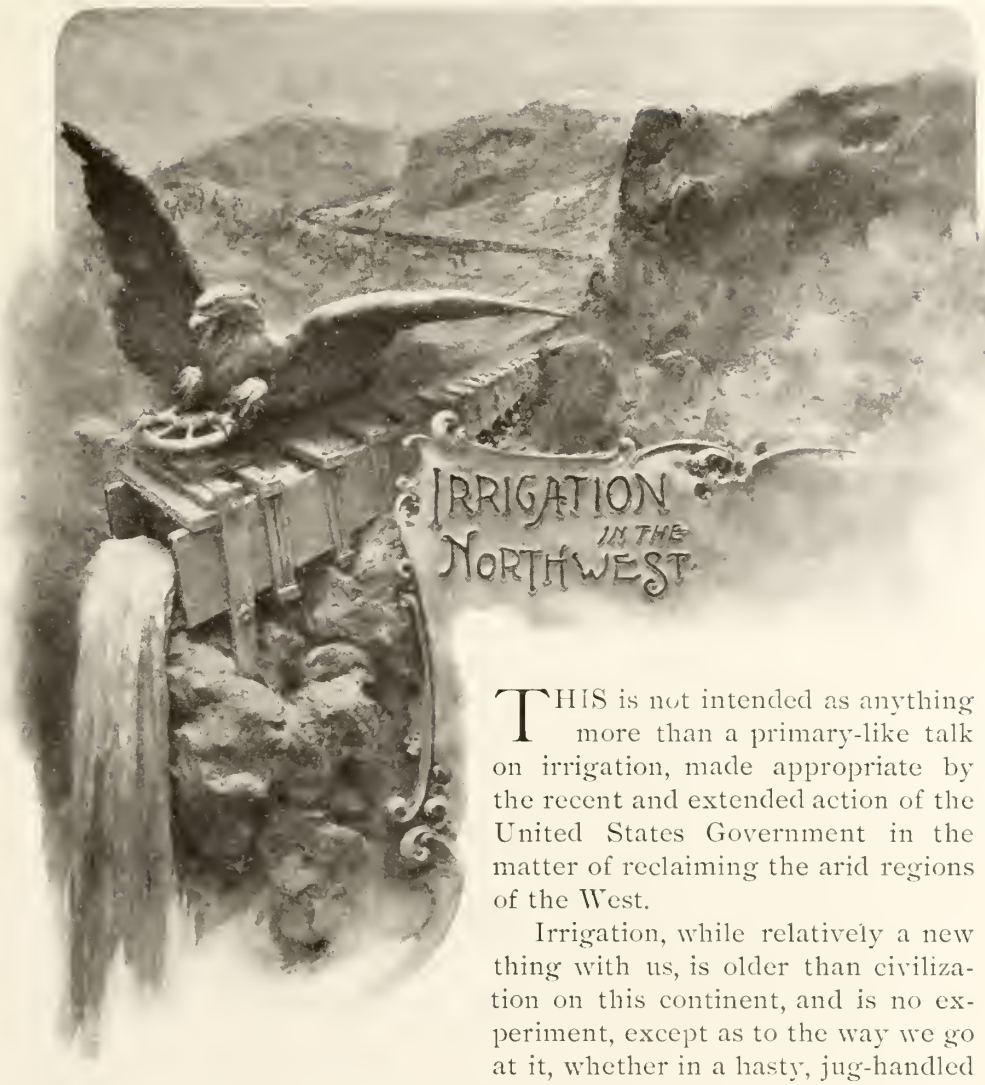
Each person will interpret the story and picture as one will, but it is worth while, merely as a matter of curiosity, if for no other and better reason, to study this wonderful kaleidoscope in detail and

Fawns in Yellowstone Park.

see what a variety there is found. Early morning, too, is the time for an effective picture, for then the mists from the fall roll up and out of the gorge and balloon along its walls, giving a peculiar weird effect to the landscape.

But my evening vision lies in my mind as at least as wonderful, perfect, reposeful, and sublime a picture as any I have ever seen of this masterpiece of Omniscience.

Coaches coming into Mammoth Hot Springs Hotel from Gardiner.



THIS is not intended as anything more than a primary-like talk on irrigation, made appropriate by the recent and extended action of the United States Government in the matter of reclaiming the arid regions of the West.

Irrigation, while relatively a new thing with us, is older than civilization on this continent, and is no experiment, except as to the way we go at it, whether in a hasty, jug-handled sort of way or in a scientific, methodical manner coupled with economic common sense. In the work that the government purposes doing in irrigation, "Make haste slowly" is a maxim worth following.

The work to be done can be done only by government. Drainage channels and areas are superior to, and have the right of way over, State lines and areas, and the problem thus assumes perforce a national character, especially so as the lands to be reclaimed are, at least nearly all, owned by the National Government.

It is estimated that the irrigated area in this country is now about 7,500,000 acres, a part of which is in New Jersey and Connecticut, and possibly also in other Eastern States. While there are something like 600,000,000 acres of western lands susceptible of irrigation, the water available will not irrigate more than 60,000,000 acres,

The Yellowstone River near Hunter's Hot Springs, Mont.

and of these the government works proposed would not cover more than 20,000,000 acres. The fund from which these storage reservoirs, etc., are to be constructed is formed from the proceeds of sales of government lands and, it is understood, now amounts to about $10,000,000.

The suggestion from some parts of the East that this sagebrush land should remain sagebrush land and not be brought under productive cultivation, is born of an unworthy, narrow selfishness not entitled to consideration.

It is certainly not the spirit manifested by the founders of our government and heralded in *E pluribus unum*, and it is just as certainly not justified by common sense and common honesty.

The interdependence of all parts of this country would seem to have been plainly shown in the coal troubles of 1902.

When the coal crop fails in Pennsylvania and West Virginia, the farmer in Minnesota and Michigan must suffer; when the corn crop in Iowa and Kansas is drowned or burned out, the stock feeder and grower in Ohio and New York feels the loss; when a great manufacturing industry in Massachusetts is crippled, the entire country feels its effects, and when the wheat crop in North Dakota is a failure, every household in Maine and Virginia knows of it. Surely we have come to know that, in this country at least, "no man liveth to himself." The doctrine that the waste

Montana Beauties.

lands of the West, so phenomenally fertile when capable of irrigation, should be allowed to remain deserts because the farmer of the East might be injured by adding these areas to our cultivable lands is certainly an illegitimate child of the imagination and a possible insult to the Almighty. It certainly will not find extended lodgment in the minds of serious and right-minded thinkers in this twentieth century. There must soon come a general revision of farming methods everywhere, both east and west. Old ruts must be abandoned, old crops discarded for new and more profitable ones peculiar to each section.

Some of the finest opportunities for wide extended irrigation and some of the best examples of present-day irrigation are to be found in the Northwest. That this fact may not be as generally known as is desirable is owing, perhaps, to the innate modesty and strict attention

4,500 Sheep near Helena, Mont.

to business of the average northwesterner.

Then, too, the farmer of the Northwest has been working along experimental lines, largely, and his successes in irrigation have made him uncertain as to whether he might not go much farther in his claims as to what he could accomplish than he had, until recently, dared to dream.

Loading Sheep at Columbus, Mont., for Eastern Markets.

Fruits, vegetables, grains, and grasses which were once deemed impossible to be raised in certain localities, are now pronounced successes, just as apple-growing in Minnesota and corn-raising in North Dakota are assured facts, though formerly believed to be impossible.

The grand climate of the Northwest, in conjunction with the large amount of water available for irrigation, is certain to cause the Northwest to become a favorite and exceptionally successful field for irrigation. The climate, pure and cool, adds a flavor, a plumpness, a color, a piquancy, to fruits, vegetables, and grain that adds greatly to their value, while the abundant supply of pure water insures regularity and sufficiency in quantity and independence to the irrigator. *Independence* of rain or drouth is in fact the keynote of irrigation.

As showing the intrinsic worth of Northwestern irrigation-grown plants, the late Marcus Daly regularly shipped to his racing quarters in the East, grain and hay grown on his magnificent ranch in the Bitter-root valley, Montana, for the use of his fine array of racers, being convinced that the value of the crops raised in this garden spot of Montana was so far beyond the value of the best crops raised in the East, that it was economy thus to do.

If the young farmer of the East or middle West, with an eye to seeking a future home in a new country where land prices are low, for some reason wishes to pass by the great and now foremost dairy State of Minnesota, and Red river valley, the home of flax and hard wheat, and the cattle plains of western North Dakota, he can make no mistake in searching out a ranch home in the irrigable valleys opened up by the Northern Pacific.

Alfalfa is the great forage crop of the West, and for 350 miles, nearly, the valley of the Yellowstone river in Montana can be made one continuous alfalfa field.

Silk Skein Fall, Middle Creek Cañon, near Bozeman, Mont.

In the neighborhood of Billings, Big Timber, Columbus, and Miles City the deep, beautiful green of the vast alfalfa fields found in the Yellowstone, Tongue, and Clark's Fork valleys is a stirring revelation to the Eastern farmer. In the winter this enormous tonnage of hay—alfalfa fields are cut from two to four or more times each season—is fed to the large herds of sheep that in summer roam the ranges back from the river. In the winter of 1901–1902 more than 250,000

The Gallatin Valley, Montana.

Sagebrush before irrigation.

A garden after irrigation.

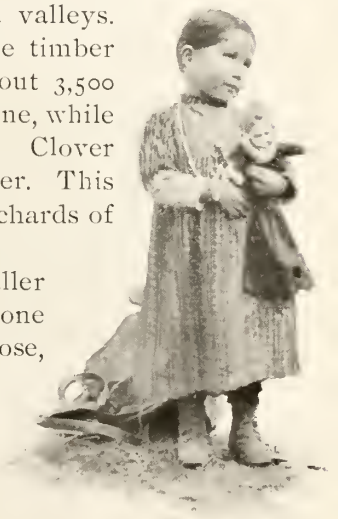
sheep were thus fed in that part of the Yellowstone valley tributary to Billings. In the vicinity of Billings and Miles City there are very large irrigation canals which have completely transformed that part of the valley.

If the farmer wishes a home in one of the most beautiful, mountain-walled, healthful valleys in the world, where clover, timothy, barley and oats are crops *par excellence*, and where he will be near first-class and permanent markets, the Gallatin valley is a spot for him to visit. Clover is a famous crop here, and is fed to a large number of stock, during the winter, while the Gallatin valley barley is of such excellence and strength that large quantities of it are exported to Europe.

At Bozeman, in this valley, is located the Montana Agricultural College and Experiment Station, and their fine work is reaping results which the Montana farmers appear to appreciate.

The valleys of the Madison, Jefferson, Deer Lodge, Hell Gate, and Clark Fork of the Columbia afford beautiful farm or ranch sites, some of them better suited for grain or hay and stock-raising, others for fruit-growing, while timber for fuel, fencing, and building is abundant and near at hand.

A little Flathead Indian girl and doll.



The Bitter-root valley is, perhaps, the gem of Montana valleys. Well protected by mountains which furnish an inexhaustible timber supply and an abundance of purest water, its elevation, about 3,500 feet, is such that the range in fruits and vegetables is a wide one, while grain and hay are unfailing crops and of exceptional quality. Clover flourishes so well that re-seeding has to be done seldom or never. This is the favored fruit region of the State, and there are some orchards of mammoth proportions to be found there.

There are beautiful farm home sites in many other but smaller stream valleys and in the foothills of the mountains, so that one has an almost infinite variety of situations from which to choose, and irrigation is an important factor in all of them.

1. Barley crop from one ranch in Gallatin Valley.
2. Farmers and Merchants Elevator, Bozeman, Mont.
3. Montana State Agricultural Buildings, at Bozeman, Mont.
4. Manhattan farm, Gallatin Valley, Mont.

In Idaho and parts of Eastern Washington there are either fewer running streams than in Montana or they are not susceptible of being extensively used for irrigable purposes. There is also more moisture during the growing season, so that the lands in the Big Bend, Palouse, and most of the Clearwater or Lewiston regions, need and have little or no irrigation except that on the bottom lands of the Clearwater river, especially around Lewiston and Clarkston, there are to be found some splendid ranches, the products of irrigation.

In Eastern Washington there is one notable exception to this — the Yakima valley. Here is to be found, probably, the most conspicuous example in the entire Northwest of what irrigation can accomplish, and it is one of the most noteworthy instances in the wide West.

The Yakima river rises in the eastern slopes of the Cascade range and flows southeastwardly into the Columbia river.

There is such an ample supply of water that a water famine is almost an impossible thing, notwithstanding that there is an unusually large acreage of land capable of irrigation.

There is a wide range of elevation and climate in the valley, and necessarily, therefore, of products. At Kennewick, near the foot of the valley, the elevation is less than 350 feet, at North Yakima about 1,000 feet, and at Ellensburg, in what is locally known as the Kittitas valley, it is 1,500 feet.

The lands found here are of the usual sagebrush variety, remarkably productive when watered, and irrigation has made giant strides within recent years.

The valley has numerous local subdivisions, and is bounded longitudinally by volcanic hills that afford good pasturage to cattle, sheep, and horses.

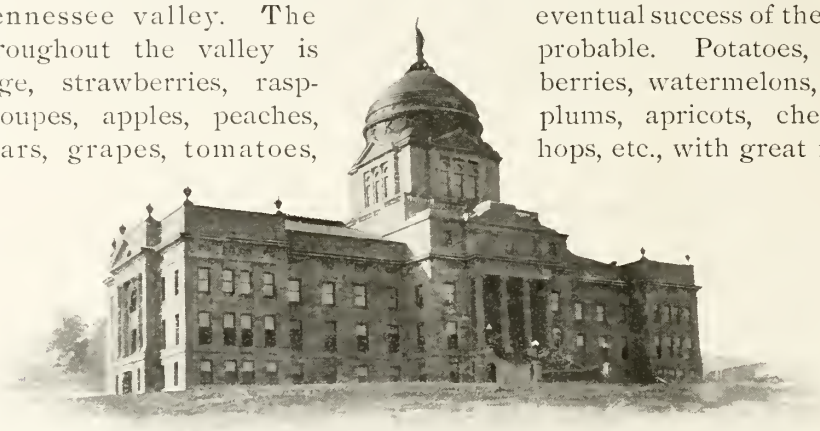
If one wishes to see at a glance, and in a manner at once startling and convincing, what well conceived and well directed irrigation will accomplish, he need only visit North Yakima, Washington, one of the most progressive and attractive towns in the Northwest.

With a quiet, insistent energy, the country of which this little city is the center has gone ahead working out the irrigation problem in a sensible, progressive, and, I am glad to say, *profitable* fashion, so that to-day, with no boom to hamper it, the country is ahead of the town and the latter is growing and expanding in a dignified, economic way very satisfactory to behold.

A vast area of gently rolling country is watered by half a dozen or more

Herd of horses on the move in Eastern Montana.

streams, of which the Yakima river itself is the trunk. Almost every imaginable variety of product, both vegetable and horticultural, is or may be raised here, the question as to choice depending upon the profit per acre derivable. Grains, except corn, are easily raised, but are comparatively profitless, the land being so valuable, and they are little in evidence. Corn is not considered a sure crop, but I have specimen ears, taken at random from a field, that would do credit to Iowa or the Tennessee valley. The eventual success of the crop throughout the valley is probable. Potatoes, cabbage, strawberries, raspberries, watermelons, cantaloupes, apples, peaches, plums, apricots, cherries, pears, grapes, tomatoes, hops, etc., with great fields



Montana State Capitol, Helena.

of alfalfa or occasionally red clover, variegate the landscape in a way beautiful to see. The alfalfa acreage is enormous, some of it in large tracts — 80 to 120 acres — most of it in small fields. The land is generally held in small parcels and is very valuable. On one section — 640 acres — near North Yakima there are forty families. Improved land near the town sells for from $500 to $1,000 per acre, but when the owner of a forty-acre fruit ranch sells twenty-five carloads of products yearly which net from $2,500 to $4,000; when winter apples sell for from $400 to $500 per acre, on the trees; when potatoes, which are exceptionally good, run from 400 to 600 bushels per acre; when a fair-sized hop field yields profits running into the thousands, the reason for these prices, which include water rights, is apparent.

Alfalfa is, I presume, the greatest product of the valley. It is easily grown, is cut from two to four times per season, and produces from five to eight or more tons per acre. It is fed to thousands of head of stock in the valley, and large amounts are baled and exported.

Land in the lower valley, near Prosser, Kiona, and Kennewick, is equally as good as that in the upper valley, and unimproved land *with water rights* can be purchased for $75 per acre and even less. The large areas of unimproved land are found in the Sunnyside country and in the regions about Prosser, Kiona, and Kennewick.

Around Ellensburg large quantities of timothy hay are raised and dairying is advancing rapidly. It is an ideal dairy region, the valley

being wide, level, well-watered, and, the elevation being greater, the climate is cool and exhilarating.

The towns here named are the nucleii of rapidly expanding communities. A ride about North Yakima will show how, in an ideal irrigation region where products are diversified, the usual isolation and solitude of a farming country are entirely wanting. The whole countryside constitutes the suburbs of the town, with the result that neighbors touch elbows, and rural postal delivery, telephones, electric lines, good roads, many schoolhouses and churches, are easily possible, and, where taxation is necessary in order to have them, it is but for a small amount per capita. Where, as around Ellensburg, hay ranches and dairy farms are numerous, families will be somewhat farther apart, but the rule of non-isolation, relatively, obtains even there.

If the Yakima valley has here been emphasized it is simply because the irrigation problem has there received its fullest demonstration in the Northwest. Soil, water, and climate there form a rare combination, but what the Yakamites have accomplished may be done in any of the valleys named in Idaho and Montana as well, with such modifications as climate imposes. Where a variety of fruits can be successfully raised as in the Bitter-root valley, small, profitable ranch farms may be the rule, if the people go about their work in the same intelligent, progressive way that those resident in the Yakima valley have, with the result that the valley may become one large rural community with all the advantages of an urban population.

There is no uncertainty whatever as to the future of these irrigable lands. With the impounding of the flood waters of the streams through government aid so that the annual

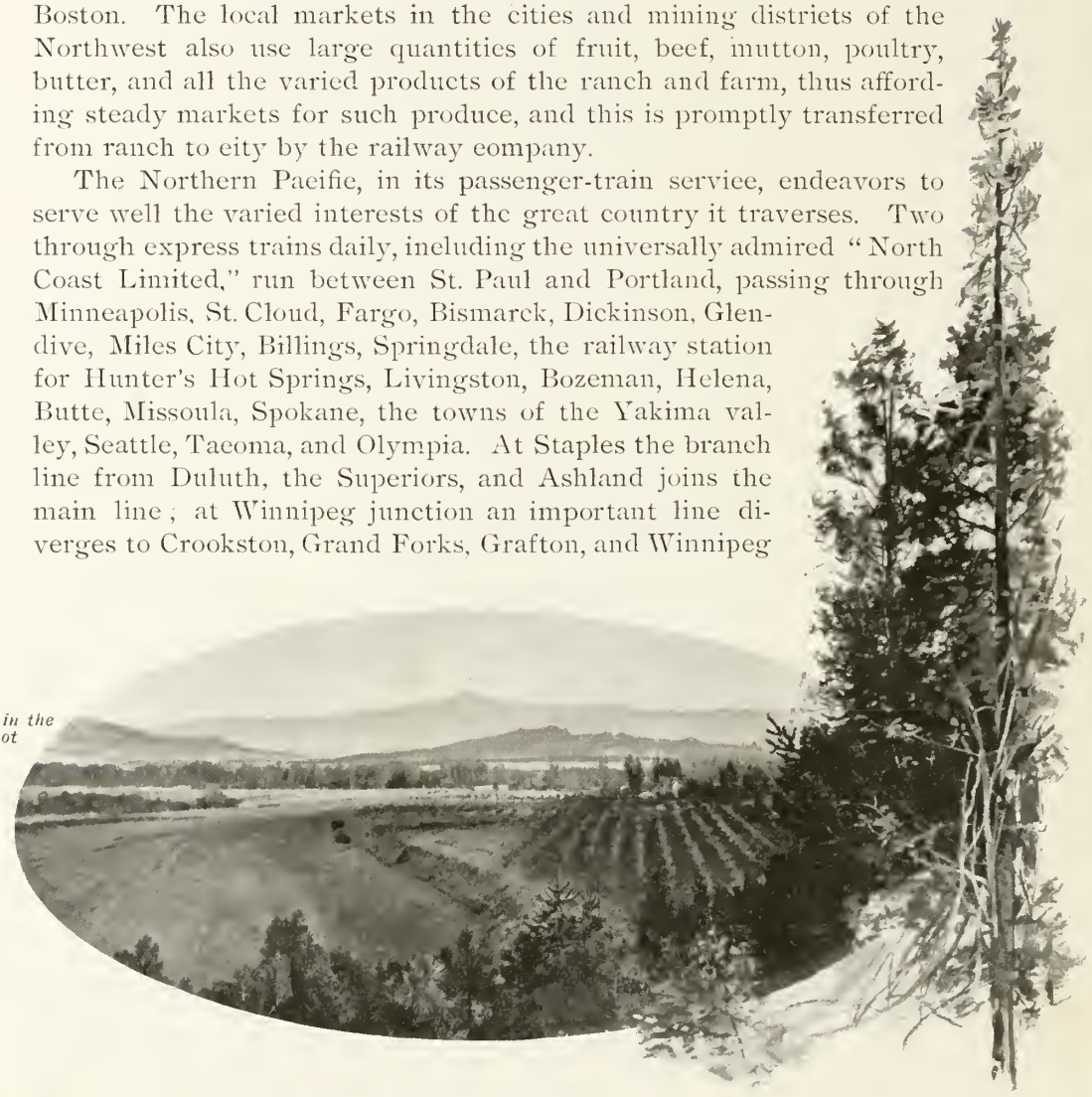
Cattle scene, Western Montana.

A view of the Jefferson Valley, Montana.

wastage may be saved and utilized at the season of irrigation, a vast addition of land will also be saved for man's benefit. Pastures verdant and beautiful, orchards of luscious fruits, fields of waving grain, and homes ornamented with vines and flowers, will succeed the gray, lifeless areas of sagebrush and greasewood which have hitherto been a reproach to common sense and husbandry.

In the development of the varied resources of the Northwest the Northern Pacific has borne and bears an important part. When cattle and sheep are ready for market its fast stock-trains whirl them at express-train speed to Minneapolis, St. Paul, Chicago, or, via its "Burlington" connection at Billings, to Omaha, Kansas City, and St. Louis. At the time of fruit-ripening fast fruit-trains of refrigerator cars are put on, and the fruits of the Washington, Idaho, and Montana ranches are soon being enjoyed by the people of eastern cities, even as far east as Boston. The local markets in the cities and mining districts of the Northwest also use large quantities of fruit, beef, mutton, poultry, butter, and all the varied products of the ranch and farm, thus affording steady markets for such produce, and this is promptly transferred from ranch to city by the railway company.

The Northern Pacific, in its passenger-train service, endeavors to serve well the varied interests of the great country it traverses. Two through express trains daily, including the universally admired "North Coast Limited," run between St. Paul and Portland, passing through Minneapolis, St. Cloud, Fargo, Bismarck, Dickinson, Glendive, Miles City, Billings, Springdale, the railway station for Hunter's Hot Springs, Livingston, Bozeman, Helena, Butte, Missoula, Spokane, the towns of the Yakima valley, Seattle, Tacoma, and Olympia. At Staples the branch line from Duluth, the Superiors, and Ashland joins the main line; at Winnipeg junction an important line diverges to Crookston, Grand Forks, Grafton, and Winnipeg



A ranch in the Bitter-root Valley.

The Gate of the Mountains, near Helena, Mont.

in the Red river valley; at Fargo, Casselton, and Jamestown other branches run north and south in North Dakota; around Helena and Butte branch lines stretch out into the mining camps and valleys; at Missoula the Bitter-root branch runs south up the wonderful valley of the same name, and the Cœur d'Aléne branch, paralleling the main line on the opposite side of the mountains, winds over the Divide and down to the Cœur d'Aléne mining district at Wallace, Wardner, and Burke. Then at Spokane the Big Bend, Palouse, and Clearwater regions with their thriving farms and towns are reached by lateral lines, and at Pasco the Walla Walla country is penetrated by another one. On the coast Northern Pacific branch lines radiate in all directions into coal fields, farm valleys, timber regions, etc., north and east and west from Tacoma and Seattle. At Kalama, on the Columbia river, a new line extends down to Vancouver, Wash., opening up Clarke county, one of the finest agricultural regions in Washington. And there are still other "feeder" lines here and there, the whole system not only affording an easy means of reaching all parts of the region, but providing a widely extended area of distribution for the increasing output of the northwestern irrigable valleys, and also facilitating the mutual interchange of products among the different sections of the Northwest and providing an outlet for the surplus wheat, fruit, wool, etc., to the East and Europe and to the Orient, Australia, and Alaska.

Besides the two through trains named, another, handled jointly by

1. *Potatoes grown by irrigation, Yakima Valley, Wash.*
2. *Stacking alfalfa at Parker Bottom, Yakima Valley, Wash.*
3. *Moxee Canal flume, Yakima Valley, Wash.*
4. *Northern Pacific Railway along Clearwater River.*
5. *Vineyard, Yakima Valley, Wash.*

6. *Headgate Sunnyside Canal, Yakima Valley, Wash.*
7. *Packing apples in Yakima Valley, Wash.*
8. *An irrigation flume, Yakima Valley, Wash.*
9. *Only four months after the sagebrush was cleared away.*

the Northern Pacific—between Billings and Puget sound and the coast —and the Burlington System—between Billings and Kansas City and St. Louis—connects the far Northwest with the Southwest, South, and East by a train service first-class in every particular.

Refrigerator cars are frequently placed in some of these trains, and these, with the express service, bear an important part in quickly moving from the ranchman to the consumer the perishable fruits, dairy goods, etc., raised on the irrigated farm.

Group of Cheyenne Indians at Rosebud Station.

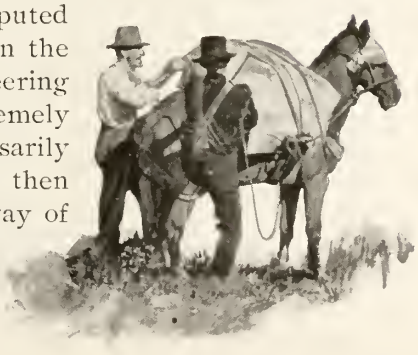
ONE HUNDRED AND FIFTY MILES WITH A PACK TRAIN

A TRIP into the mountains with a pack train under moderately favorable circumstances is, for the man who can thoroughly enjoy nature and unconventionality in traveling, a rare treat.

It is, indeed, the only way in which the heart of the mountains in the West, and their deep and secret fastnesses, can be reached at all, for roads rarely penetrate them, and then usually at only the most accessible and least interesting points.

In the hope that readers of "Wonderland 1903" may enjoy a brief sketch of a pack-train journey into a little known and very mountainous region in Idaho, this skit is written.

The Divide between Montana and Idaho is the summit line of the Bitter-root mountains. This range is justly reputed one of the most forbidding and difficult ranges on the continent through which to travel. The engineering obstacles to railways and wagon roads are extremely hard to overcome, but eventually these will necessarily yield to human persistency and ingenuity. Until then the trail and pack train is the only practicable way of



"Buckskin."

N. P. R. bridge across the Clearwater at Kamiah.

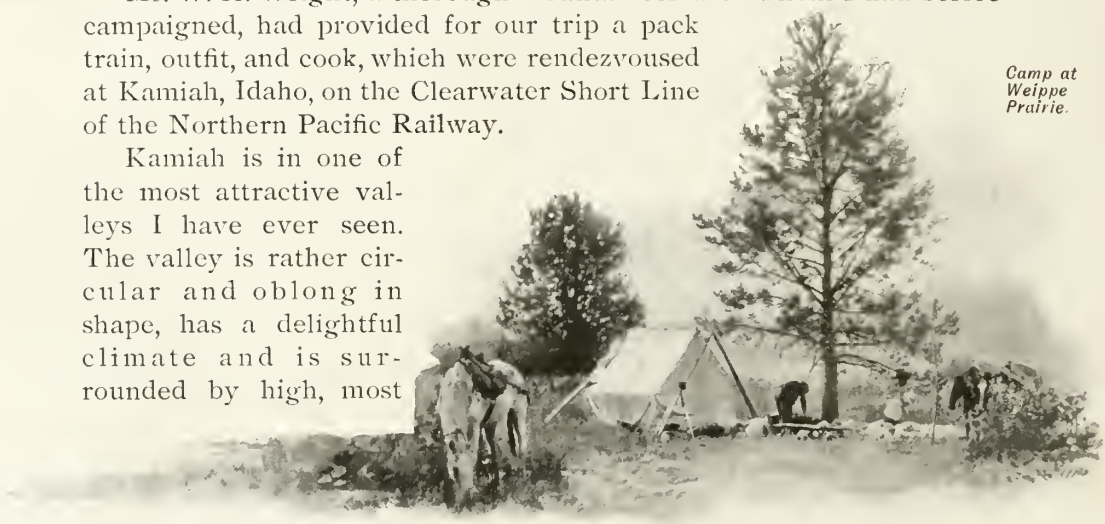
traversing these grand and lofty defiles, where the forests bend, the rocks are washed by the clouds, the mountain streams roar their way to the sea, and the fish and game thrive in seclusion.

Stretching across this region of tremendous distances, high elevations, and abrupt declivities, runs an old Indian trail of historic renown. It was originally known as the northern Nez Percé Indian trail, in contradistinction to the southern Nez Percé trail farther south. It is now and has long been known as the Lolo trail, and it extends from a point about eleven miles south from Missoula, Mont., westward to the Clearwater river in Idaho. It was over the western part of this well-worn trail that the writer essayed to make his way in the summer of 1902, having been previously over the eastern portion.

I have said that this trail is historic. In a general way it is the route used by Lewis and Clark in crossing the watershed between the Bitter-root and Clearwater rivers — both being branches of the Columbia — in 1805 and 1806, and the story of their experiences there reads like fiction. In 1877 Chief Joseph and the Nez Percé Indians, after beginning the well-known war of that year in Idaho, retreated across this trail into Montana, followed by General Howard and the United States troops in a long and, for that part of the army, a fruitless stern chase.

Mr. W. H. Wright, a thorough mountaineer with whom I had before campaigned, had provided for our trip a pack train, outfit, and cook, which were rendezvoused at Kamiah, Idaho, on the Clearwater Short Line of the Northern Pacific Railway.

Kamiah is in one of the most attractive valleys I have ever seen. The valley is rather circular and oblong in shape, has a delightful climate and is surrounded by high, most



Camp at Weippe Prairie.

gracefully carved and grassy mountain slopes. Above these slopes to the south stretch the wide, fertile plains of Kamas prairie. Here live the Nez Percé Indians and, sandwiched among them, many white settlers.

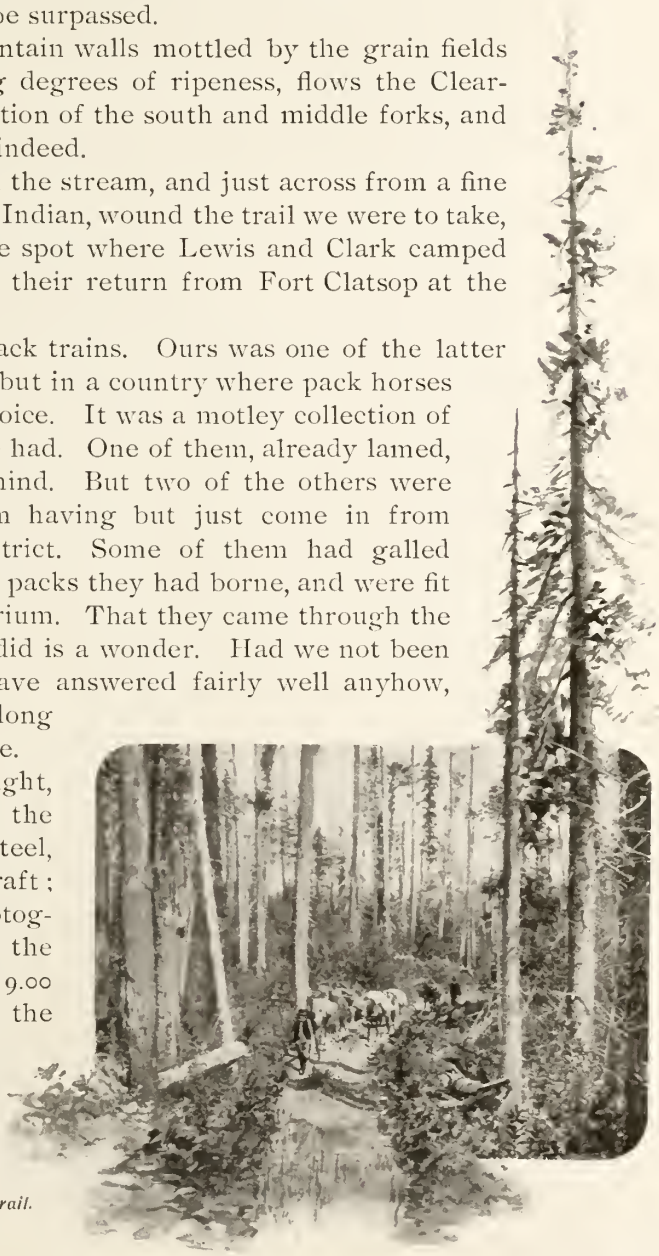
The Indians have taken up the old lands of their reservation in severalty, and the surplus acres have been sold to the whites. The Indians have fine farms along the Clearwater and even high up among the hills, and both reds and whites appear to thrive with little or no friction. Grain and vegetables grow to perfection here, and grapes, cherries, peaches, and other fruits find a natural soil and a congenial climate that can not be surpassed.

Through this valley, its mountain walls mottled by the grain fields of the Indian farms in varying degrees of ripeness, flows the Clearwater river, fresh from the junction of the south and middle forks, and a rapid and clear-water stream indeed.

Up a long, brown slope from the stream, and just across from a fine ferry owned and managed by an Indian, wound the trail we were to take, and a mile down stream was the spot where Lewis and Clark camped for some time in 1806, when on their return from Fort Clatsop at the mouth of the Columbia river.

There are pack trains *and* pack trains. Ours was one of the latter sort. Wright had done his best, but in a country where pack horses were in demand he had little choice. It was a motley collection of eight riding and pack horses we had. One of them, already lamed, we finally decided to leave behind. But two of the others were really fit to use, most of them having but just come in from Thunder mountain mining district. Some of them had galled backs and sides, from the heavy packs they had borne, and were fit candidates for an equine sanatorium. That they came through the ordeal with us as well as they did is a wonder. Had we not been limited for time they would have answered fairly well anyhow, but they were not equal to the long marches we were forced to make.

There were four of us: Wright, whose detailed knowledge of the region was most thorough; Casteel, the cook and a master of his craft; Mr. De Camp, a painter and photographer of Helena, Mont., and the writer. We left Kamiah at 9.00 o'clock one morning, crossed the river on the ferry and started up the trail. In packing the horses some time was lost in adjusting packs, and two or



On the Trail.

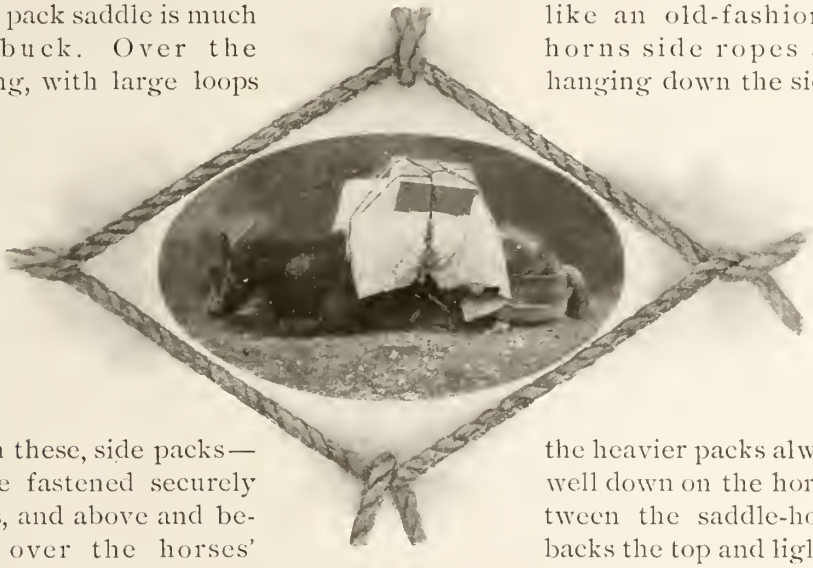
Clearwater Valley at Kamiah, Idaho, looking west. Lawyer's Cañon in middle distance.

A clearing on the Weippe Prairie.

three animals had to be blindfolded while packing them. One horse, Buckskin, developed great disinclination to thus being made a beast of burden, and was disposed to cavort around and "buck."

Casteel's Bucephalus indulged in a spree of bucking, but his wild-west-showism was short-lived.

A pack saddle is much like an old-fashioned sawbuck. Over the horns side ropes are swung, with large loops hanging down the sides.



Pack horse lying down showing method of tying on the pack. Part of the "diamond hitch" extends beyond the farther side of the box on top of pack, the "diamond hitch" being formed on top of pack.

With these, side packs—the heavier packs always—are fastened securely well down on the horse's sides, and above and between the saddle-horns and over the horses' backs the top and lighter packs are placed. The whole is then covered with a heavy canvas pack cover and lashed on with a pack rope in a form known as a diamond hitch, from the diamond shape formed by the tightened rope over the top of the pack. A regulation pack rope with broad canvas cinch is thirty-two feet in length. Two men are required to pack a horse or mule, but one can do it when necessary if the animal be tractable.

Our route was up an unshielded slope in the blazing sun until we had climbed 1,000 feet, and the latter part of the way was very steep. At such places the wise climber and trailsman climbs afoot and relieves his horse. This we did as much as possible, but two of us were fresh from offices and had to be gradually broken in. The legs of Wright and Casteel might as well have been of wood or steel so far as any feeling of fatigue went. Wright was not in the saddle once during the trip, and this is his usual way of doing; he loves walking and appears tireless.

Pack horse ready for packing.

After reaching the summit we traveled for a mile across a pine and tamarack tree divide, which is being gradually cleared by settlers, and then began the descent to the crossing of Lolo creek, flowing into the Clearwater and, unfortunately, a duplicate in name of another creek on the eastern

Almost packed.

slope of the same range. Heretofore the old trail and modern wagon road had been more or less commingled, but now the road disappeared and the trail became one of those fine old Indian trails, wide, plain, and deep, winding down through the forest and along the mountain side in the usual sharp zigzag fashion. At last we reached the Lolo, a clear rushing stream thirty feet wide and knee deep, in a wild, secluded, and hot pocket in the mountains, forming a beautiful camping spot. Other visitors had just arrived. A fine-looking Nez Percé Indian; his comely squaw and her mother, perhaps; a black-headed, black-eyed youngster, five or six years old and stark naked, and a tiny miss clad in a very dirty calico shift, were there. About a little fire the women were preparing a noonday meal. To the young squaw's credit, she carefully washed her hands and face at the border of the stream before beginning her culinary duties. This is not strange, however, for the Nez Percés are a superior tribe of Indians in all respects.

After some bantering conversation back and forth, we climbed slowly out of the cañon, over a hard, tiresome trail, and then, down a gentle grade through the deep cool forest, made our way to the eastern side of Weippe (wee-ipe) prairie, where we bivouacked for the night under a pine tree in a forty-acre pasture and near people who know how to treat travelers in a hospitable manner.

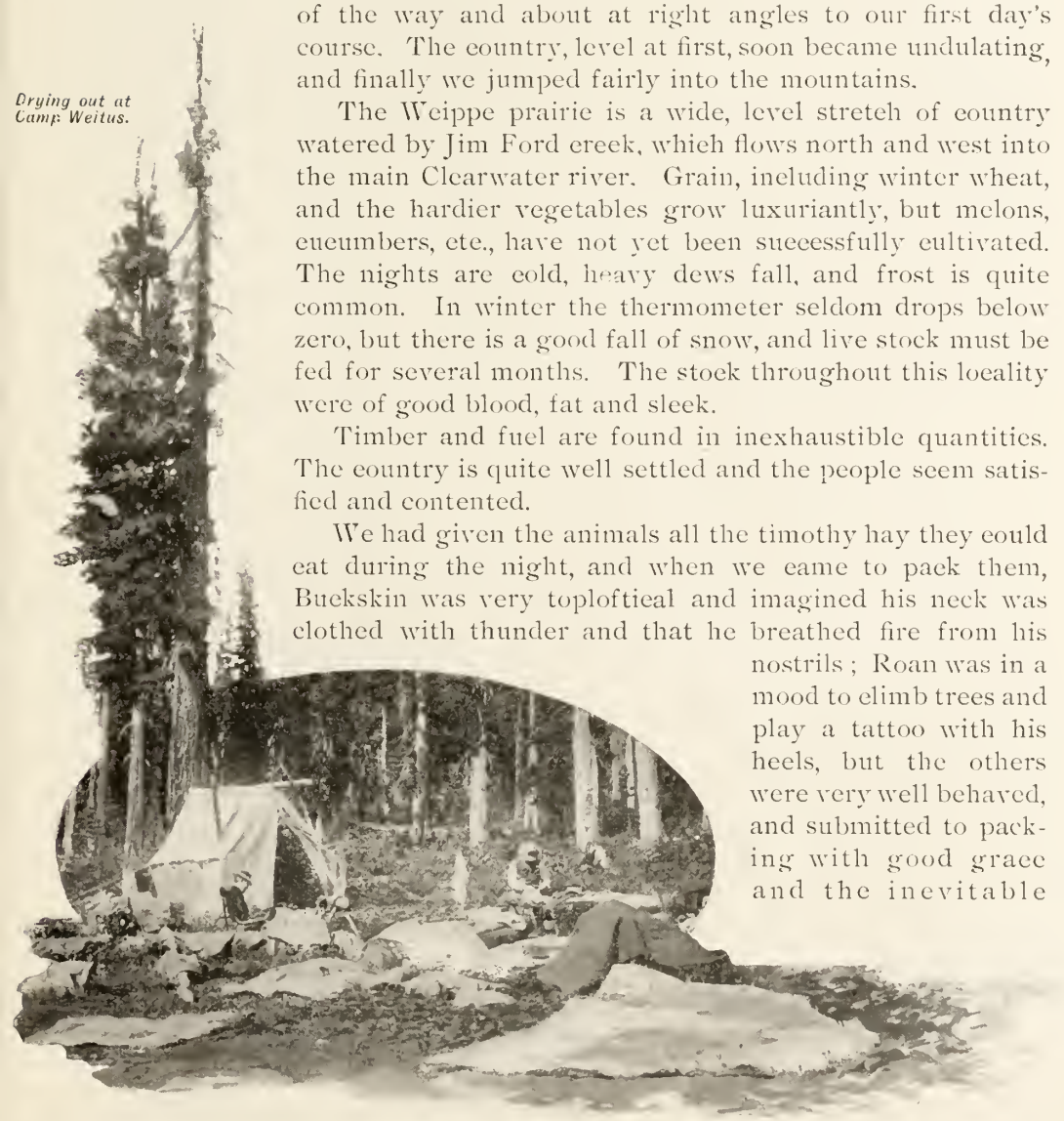
We made our first camp at 4.30 P. M., very tired and hungry, having eaten nothing since our 6 o'clock breakfast. The benefits of a good cook were now manifested. The cook's tent was soon set up, fuel cut, and on a little compressible sheet-iron stove a dinner was prepared that made our hearts happy and rid us of "that tired feeling" that had possessed us. Cream of celery soup, canned beans, succotash, bacon, potatoes, sliced onions, stewed dried apricots, warm biscuits and butter, and plenty of fresh milk and coffee to drink, soon helped us to forget

Packing up.

our hard trailing and climbing of something like twenty miles. Then we built up a rousing, crackling camp-fire from pine boughs, and sat and reclined about it until time to crawl into our blankets.

We slept in the open air, and how I did rejoice in it! Wright had a pneumatic mattress which, having left his air pump at home, he inflated with his lungs, a process requiring about five minutes, and when done he had a bed fit for a king and adapted to about all conditions of camp life. De Camp and myself had Racine portable cots. I have used this cot for years, and while it is easily transported, it forms, also, a solid, most comfortable and warm bed when properly made up, and renders one entirely unconcerned as to the general character of the ground, provided it be fairly level and dry. It is a luxury in camping and is not expensive.

Our next day's journey followed a wagon road for most of the way and about at right angles to our first day's course. The country, level at first, soon became undulating, and finally we jumped fairly into the mountains.



Drying out at Camp: Weitus.

The Weippe prairie is a wide, level stretch of country watered by Jim Ford creek, which flows north and west into the main Clearwater river. Grain, including winter wheat, and the hardier vegetables grow luxuriantly, but melons, cucumbers, etc., have not yet been successfully cultivated. The nights are cold, heavy dews fall, and frost is quite common. In winter the thermometer seldom drops below zero, but there is a good fall of snow, and live stock must be fed for several months. The stock throughout this locality were of good blood, fat and sleek.

Timber and fuel are found in inexhaustible quantities. The country is quite well settled and the people seem satisfied and contented.

We had given the animals all the timothy hay they could eat during the night, and when we came to pack them, Buckskin was very toploftical and imagined his neck was clothed with thunder and that he breathed fire from his nostrils; Roan was in a mood to climb trees and play a tattoo with his heels, but the others were very well behaved, and submitted to packing with good grace and the inevitable

groanings characteristic of old-time camp meetings and tight cinchings. Old White and Sorrel were old-timers as pack horses, were thin as rails, unwieldy and awkward as a pair of cows, but tough as mules, as steady as old maids, old as Methusaleh, and of a sternly moral cast of countenance. In trailing, Wright led the way, leading Roan; one of us followed, and then the other horses were divided as well as possible between us, so as to keep them well up in line on the trail.

This day's work was comparatively easy. At the base of the mountains we passed two beautiful little prairies or clearings on Brown and Musselshell creeks. Sleek cattle grazed the bottoms and large haystacks rose on the meadows. A few miles beyond the Musselshell the road ceased and we again turned abruptly into a deep, twisting, zigzag trail more or less beset by fallen trees. This was the main Lolo trail, away from roads and clearings and winding across the ridges and gaps of the great range.

Up and down we went, passing three small creeks trilling their way amid the dense timber, and we halted for the night at the forks of Lolo creek where solitude reigned supreme. There were no bottom lands no grazing, but the spot was otherwise suitable for a night's camp, and beside a beautiful trout stream, and we had brought along oats for the dumb brutes who were necessarily tied up during the night. Roan and Buckskin had evidently never acquired a taste for oats, for they refused to eat them and seemed suspicious as to our motives in offering them.

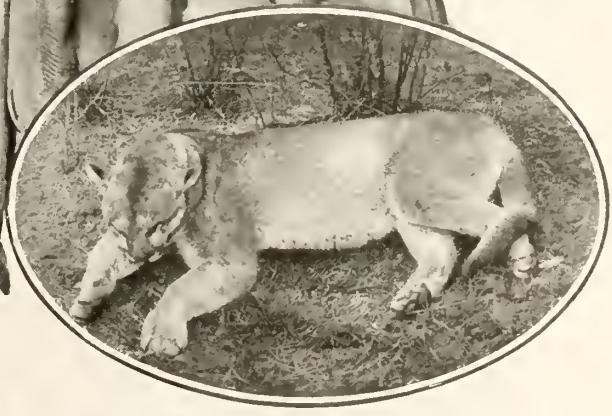
Our day's trailing had been longer than anticipated and two of us at least were very tired. De Camp, however, got out his rod and line and was soon wading the creek and whipping the rapids, and he secured a mess of trout for breakfast. I bathed my fevered feet in the cold stream, changed my shoes, and, after the royal supper provided, felt like a different man.

We erected, usually, only the cook's tent, our canvas bed-covers being all needed protection except in case of a heavy rain.

Towards morning, of this night, it began to rain and by the time we were packed and ready to start the rain was steadily falling, and as we got well into the forest the trees dripped moisture, the bushes alongside the trail deluged our legs and feet with crystal drops beautiful but coldly wet, and in the open spots the mists floated, baptizing us plentifully as we rode along and hiding from view the country about us. We were soon wet to the skin, but frequent walking spurts kept us warm. Until 2.00 P. M. the clouds dropped wetness upon us and then, for a time, it seemed as if it were clearing away. A frequent incident of the day was the swerving of a horse or two from the trail, which, on Rocky ridge, was badly obstructed by high fallen timber. Then some one must plunge into the dripping heavy undergrowth to head the delinquent back into the trail. The sudden and sumptuous bath that

Grizzly Bear and Cubs.

A Hunter's Camp in the Bitter-Root Range.



Looking toward Kamas Prairie from the Rocky Ridge.

one then experienced through to the skin and from head to foot, was something to remember, and it became very exasperating.

On this day, too, one of the riding horses, apparently in fair condition, gave completely out and had to be left behind. Our erstwhile bucking friend, put under a pack for the first time, lost all interest in our proceedings, and was driven into camp long after the others reached there, almost exhausted.

Our camp was at a clearing in the mountains shown on the maps as Weitus meadows. It is a fresh, green bit of mountain meadow-land in the depths of the range, a fine camping spot where clear, pure water, green grass, and fuel are more than abundant. The meadows, while being much higher than Kamiah, so much so that the change in temperature was easily noticeable, were yet at the base of the highest parts of the range, and were twenty-five miles from the next camping ground. As the horses needed rest we decided to remain here for a day, and then Wright and I were to push on alone as far as time allowed.

As a matter of comfort and precaution we put up a second and larger tent for sleeping purposes, and it was well that we did, for before bedtime the rain was again falling, the meadows were wreathed in mists, and the mountains hidden by the floating rain-clouds. A huge campfire of logs two or three feet thick blazed brightly before our tent door, defying the wet and throwing its light and warmth into our canvas house. It rained, more or less, all night; it rained more than less all of the following day; it rained still more during the succeeding

Passenger Engine Class "P-3." Used on Northern Pacific's Duluth Short Line.

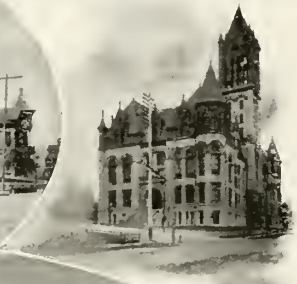
The N. P. R. "Doctor's Special" on the way to Yellowstone Park.

Excursion Train near Scoria.

North Coast Limited Eastbound along Yellowstone River.

Lake Superior Limited.

In Spokane, Wash.



Court H use, Tacom ·, Wash.

First Avenue, Seattle, Wash.
Spokane Falls, Spokane, Wash.
Helena Residences.
Tacoma, Wash.

night ; kept at it all of the next day, and simply poured down during the third night. We kept our patience as well as we could, huddled a good deal, during the daytime, about the little cook stove that sang away as merrily as the storm roared outside, and saw our limited time lost in a hopeless stranding, at least one day's ride short of where we had hoped to reach.

Man proposes, but does not always dispose.

The horses obtained a cold, comfortless, shower-bath sort of rest, ate some, wandered little, and certainly had plenty to drink.

The special object of the expedition was thoroughly accomplished despite our forced delay, and on the third day we again gathered the horses, placed the packs upon their backs after some snorting and cavorting, and started to retrace our steps. Buckskin pulled up his picket pin and led Wright a long chase through the swamp and wet grass, but was finally coralled, thrown, and blindfolded, and, once firmly packed, trudged along like a good and subordinate soldier, occasionally lying down in the vain hope of being released from his pack.

The rain ceased long enough to enable us to get our packs on without getting everything wet, and then began again in an aimless fashion, but finally we rode out of it entirely But the mists and clouds remained about Weitus for a week afterwards. The first six hours' travel were through dripping foliage, and we became thoroughly wet. From the higher divides we now obtained glimpses of the region around us. Ridge after ridge, heavily timbered, extended from east to west, with deep, yawning ravines and cañons between. To the north the North fork of the Clearwater could be traced, with white, heavily massed clouds lying motionless in the depressions, a most beautiful sight.

We were now reduced to one riding horse for four men. By noontime our equine friend with the bucking propensities, again laboring under a pack, gave evidences of nervous or other sort of prostration, and his pack was transferred to the one remaining saddle horse who assumed the burden like the trump that he was. Later in the day the "bucker" gave out entirely, and we abandoned him.

Every man must now needs make the entire distance to Kamiah afoot, and the two "tenderfeet" — in more senses than one — faced the alternative with the best grace possible.

The day's tramp was a hard one, truly, and we reached the forks of the Lolo once more, very tired and hungry.

Just before reaching there, old Sorrel, who at times was the embodiment of awkwardness, slipped at a bad point in the trail and rolled over and over in picturesque fashion down the steep mountain-side. His pack saved him from injury, but it required fifteen minutes to work him back to the trail, for it was an awkward place for such a mishap.

Sorrel cut an interesting figure as he lay sprawled on his back for a time, his feet pawing the air in an effort to right himself.

Another cold foot-bath and warm dinner served to make life worth living again after our hard day's work, and we sought our beds with alacrity when evening's deep shadows darkened the musical stream.

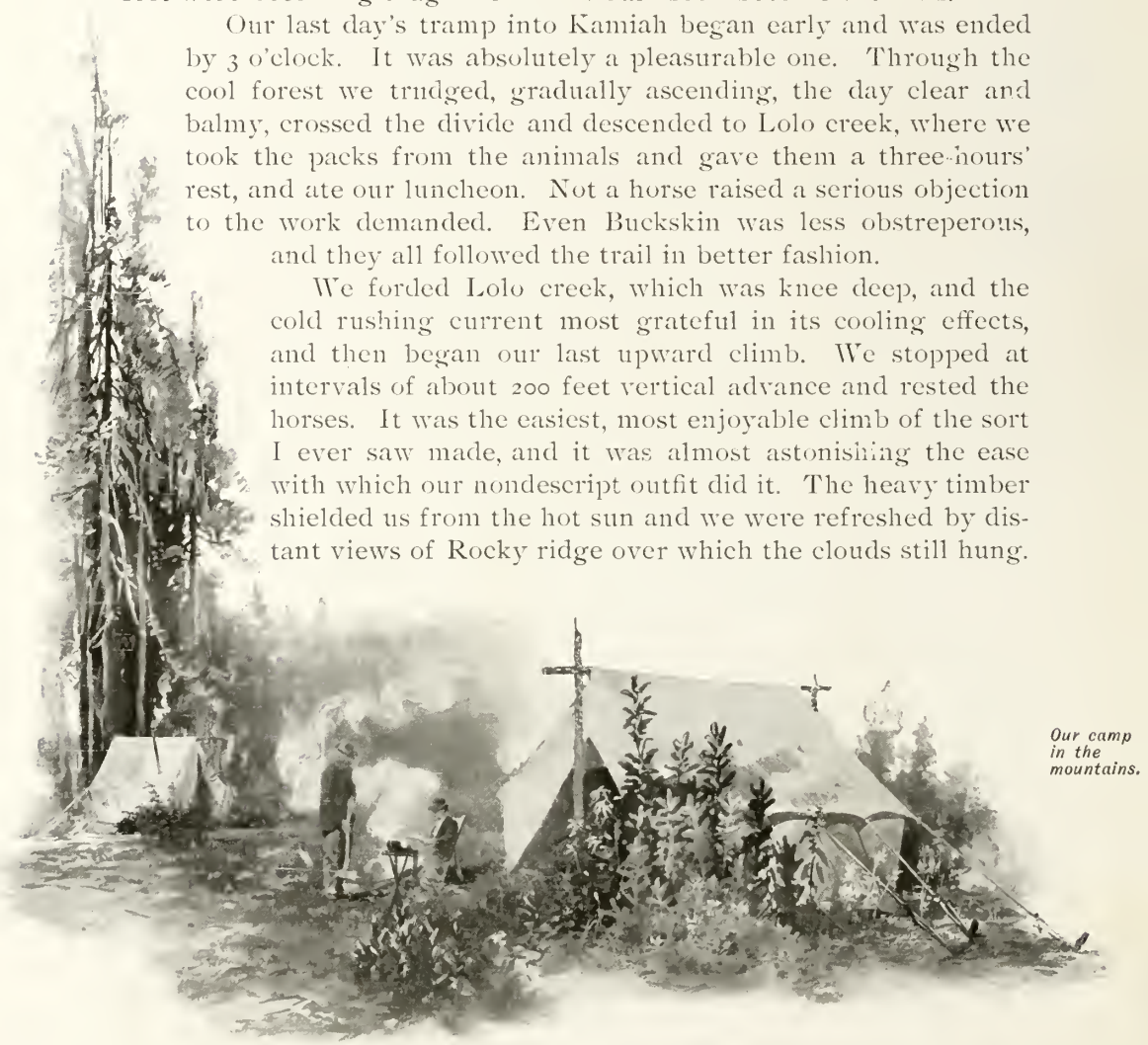
Lewis and Clark had passed along here a century before, and we were bivouacked at the forks of their Collins creek.

At 6.45 A. M. we were again on the trail for the Musselshell meadows which we reached in two hours. There we turned the horses into a barn and treated them to three hours' rest, some oats and timothy hay, for which we were charged robber's prices with the utmost nonchalance imaginable. It was a relief to reach our old friend Huckleberry in the Weippe prairie again that evening, where we were welcomed with cordiality and bought hay for a reasonable compensation.

The pack train performed its duty nobly this day, and the long tramp of twenty-five miles was less fatiguing than usual. The tenderfeet were becoming toughened and would soon become veterans.

Our last day's tramp into Kamiah began early and was ended by 3 o'clock. It was absolutely a pleasurable one. Through the cool forest we trudged, gradually ascending, the day clear and balmy, crossed the divide and descended to Lolo creek, where we took the packs from the animals and gave them a three-hours' rest, and ate our luncheon. Not a horse raised a serious objection to the work demanded. Even Buckskin was less obstreperous, and they all followed the trail in better fashion.

We forded Lolo creek, which was knee deep, and the cold rushing current most grateful in its cooling effects, and then began our last upward climb. We stopped at intervals of about 200 feet vertical advance and rested the horses. It was the easiest, most enjoyable climb of the sort I ever saw made, and it was almost astonishing the ease with which our nondescript outfit did it. The heavy timber shielded us from the hot sun and we were refreshed by distant views of Rocky ridge over which the clouds still hung.



Our camp in the mountains.

Bull Elk. *The Clearwater Valley, Lewiston, Idaho.* *White Tail Deer in Bridger Range.*

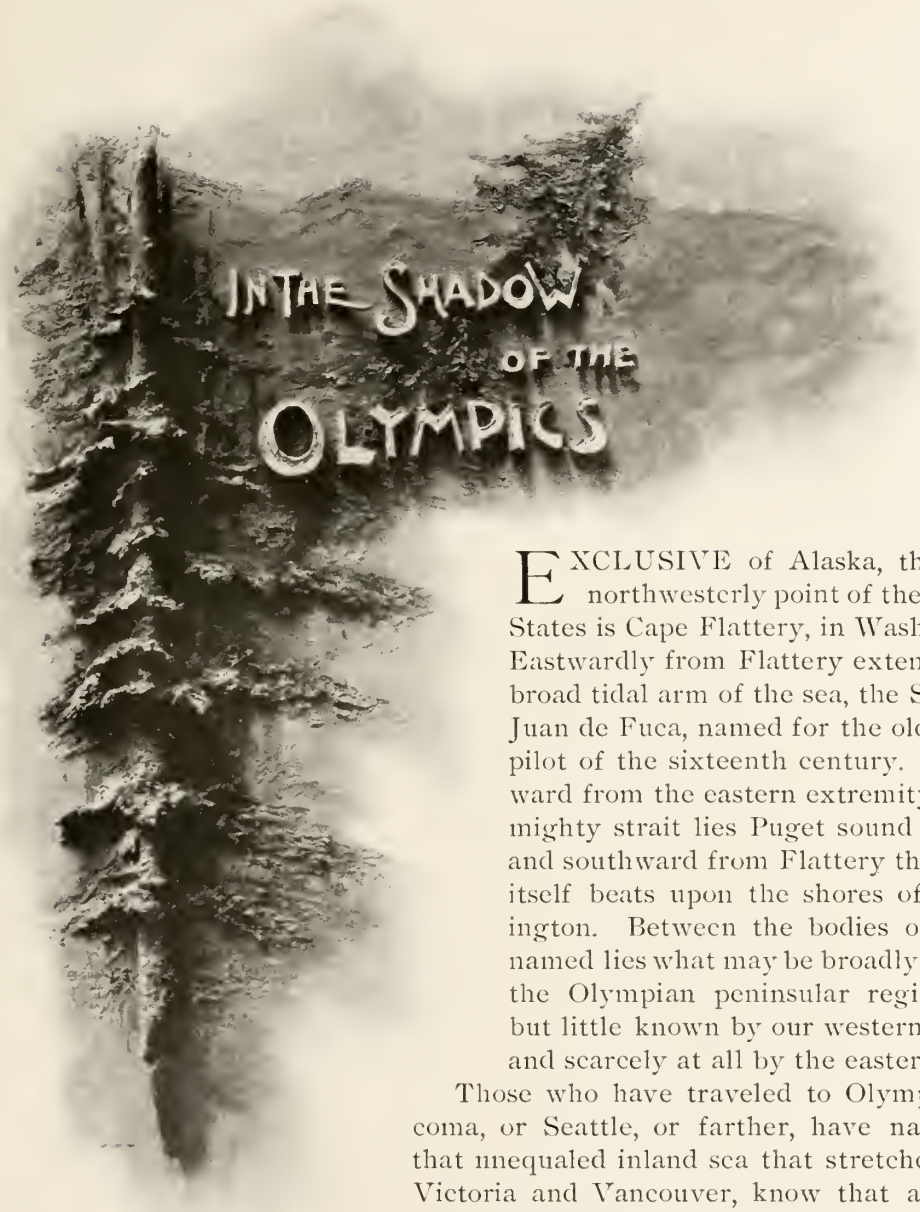
Our downward tramp to the ferry was through the blazing sun, and the abrupt trail was made very hard by the small, dried mud chunks caused by the recent heavy rains. This last three miles was more trying than the fifteen that preceded it.

Arrived at the railway station we unslung our packs and bade farewell to our animals, and our little mountain foray was ended.

With a little more time and a little less rain this jaunt would have been thoroughly enjoyable from beginning to end. As it was, it is a good illustration of what may result, in such an enterprise, from a slight derangement of plans or incompleteness in preparation, whether by

neglect or forced by circumstances. It illustrates, too, how much hardship and exposure one unused to it may endure without serious results ensuing. Fresh from an office and without any preliminary practice, I plunged into mountain travel, for two days was wet to the skin, and with no other unpleasant consequences than extreme but healthy fatigue.

Still, hard as some portions of the outing were, I can say with truth that I keenly enjoyed every phase of it. The idea — not pertinent here — which prompted the exploration, for such it really was, was worked out beyond my highest expectations, and this may have served as a sauce to the enterprise, even though the flesh may have been more or less crucified in the effort to keep pace with the spirit.



EXCLUSIVE of Alaska, the most northwesterly point of the United States is Cape Flattery, in Washington. Eastwardly from Flattery extends that broad tidal arm of the sea, the Strait of Juan de Fuca, named for the old Greek pilot of the sixteenth century. Southward from the eastern extremity of the mighty strait lies Puget sound proper, and southward from Flattery the ocean itself beats upon the shores of Washington. Between the bodies of water named lies what may be broadly termed the Olympian peninsular region, one but little known by our western people and scarcely at all by the easterner.

Those who have traveled to Olympia, Tacoma, or Seattle, or farther, have navigated that unequaled inland sea that stretches up to Victoria and Vancouver, know that across—west—from the sound is to be seen a fine mountain range whose snow-tipped serrated peaks appear like a succession of diamond points. The maps show that on all sides of these mountains, the Olympics, there are small Indian reservations and many water courses, of strange and almost unpronounceable Indian names, but beyond this little is generally known of the region. It is, in fact, less known, popularly, than South Africa.

Within the boundaries mentioned there is to be found the finest body of large timber, exclusive of the limited areas of big trees in California, in the United States. For mile after mile I have threaded the trail through this forest, where trees of twelve or fifteen feet in

diameter and from 250 to 300 feet in height were not uncommon. So dense is the foliage that in large portions of this forest the direct rays of the sun never reach the ground. The hunting and fishing to be found are unsurpassed and the Indians are not of the warlike tribes, but primitive, simple, peaceful.

Interior settlements are few, the towns being found upon the arms of the sea, and communication being almost entirely by boat, the few railways being logging or local roads.

At the northeastern extremity of this region lies Port Townsend, a much more important point nationally than it would now appear to be locally. It is the northwestern customs outpost, and here every incoming sailing ship must anchor and every steamer must stop and report to, and be inspected by, his world-known and genial excellency of the chin whiskers and stovepipe hat, your Uncle Samuel, before it can proceed up the sound. There, too, each vessel must make its adieus before departing from our coasts.

On either side of Port Townsend are forts Flagler and Worden, and across from it and facing it, on Whidby island, is Fort Casey. This is the locus of military protection for the Puget sound country. Across this triangle of modern fortifications, not yet entirely completed, must pass not only every boat bound to or from Alaska, Japan, China, Australia, South America, the Sandwich islands, and the remoter parts of earth, but every warship, friendly or hostile, must run the gauntlet of signal stations and frowning cannon that, from the heights, keep watch and ward over the rapidly increasing commerce and the general welfare of this wonderful region.

The two giant cities of the Puget sound country are, of course, Tacoma and Seattle, on the eastern shore, and, situated where they are, they are seen by the bulk of travel that reaches these shores.

On the eastern shore still, Everett, a few hours' ride by steamer or rail from these cities, is rapidly developing metropolitan proportions, while Fairhaven, Whatcom, and other towns to the northward, and Vancouver on the Gulf of Georgia and across the Canadian border, are in the full tide of prosperity.

Port Townsend, Wash.
Glendale Dairy Farm.
Port Townsend from Harbor.

The country on the western side of the sound has been overshadowed by that on the eastern side. Victoria, at the extremity of Vancouver island and also a beautiful Canadian city, is well known by tourists and travelers, but Port Townsend, at the north end of the Olympian peninsula, and Olympia at the south, are less known to fortune and fame. These cities, believing that every town as well as dog has its day, are awaiting the Shaksperean tide, ready to launch themselves upon its flood and ride on to success and wealth.

It is the desire to here call more particular attention to that part of the Puget sound country which nestles at the eastern base of the Olympic range and of which Port Townsend is the central point.

From a scenic standpoint no spot on the sound is better located. To the south the hoary head of Rainier is easily seen, with its ineffable crown of white; back of the town and also to the southwest the Olympics, with Mounts Olympus and Constance clean cut and distinct, rise close at hand; in front of the place and to the east and north are the broad, beautiful waters of the sound where the Fuca strait joins Admiralty inlet, and in the distance, marking the boundary between Canada and the United States, looms Mount Baker, the grand, white-robed, and majestic peak of the northern Cascade range, while to the northwest roll the waters of the wide, restless Fucan strait, a glorious stream, and beyond, on Vancouver island, another range of peaks stretching toward the ocean glistens in the sunlight.

On the great bay before the city — Port Townsend bay — steamers constantly ply, and lying at anchor are always to be seen three and four-masted sailing vessels from all parts of the world.

The Washington Mill Co.'s Saw Mill,
Hadlock, Wash., on Port Townsend.

From a health point of view this portion of the Sound country is bound, eventually, to prove, I think, a most important one. The whole Puget Sound country is a veritable sanatorium and in the future will become noted in this respect. Beginning with Green River Hot Springs on the western slope of the Cascades and in their midst, and expanding north and west from the debouchment of Green river, there is opened to mankind one of the finest health resorts in the world. Here is an expanse of water, mountain, vale, and woodland that challenges comparison with any other and affords variety suitable to the feverish desires of all mankind.

In this particular, unless I greatly err, Port Townsend and vicinity will prove most attractive. Protected by the Olympics from the moist, sweeping winds from the Pacific, its climate is mild, genial, and equable, an important agency, also, in this result being the ameliorating presence of the large body of water thereabout. The average annual rainfall for this section of the Sound region is 20 inches or less as against 30 to 65 inches for other parts, and 80 to 100 inches for the coast country west of the Olympics. The lowest temperature ever recorded at Port Townsend was 10° above zero and the highest was 88°. An average winter temperature—November 1st to April 1st—will be about 44°, and the mean for summer about 60° Fahr.

In connection with the very fine hunting and fishing and the grand opportunities for boating found in this vicinity, climate combines to make it exceptionable for hunters and anglers, tourists in general, and season resorters.

There are plenty of elk, deer, black bear, lynxes, panthers, grouse, quail, and pheasants in the mountains; the lakes and rivers abound with all kinds of waterfowl, and there are six or seven kinds of trout that race up and down the mountain streams, including the salmon trout. The sound itself supplies salmon, cod, bass, herring, smelts, sardines, etc. Clams are plentiful and oysters fairly so.

For recreation in boating the many protected bays and inlets offer the finest sort of opportunities.

In a more material sense I am afraid that I can hardly more than hint at what I found here. I could prepare a pamphlet of

Looking down Green River.

Unloading Freight at Nome City, Sept. 28, 1899.

Mount Rainier.
U. S. S. "Iowa" in Dry Dock, at Port Orchard, Wash.
U. S. Post Office and Custom House.

Farms on Discovery Bay.

statistics, statements, etc., of the region, but this has already been done and the little vest-pocket volume can be obtained from the Chamber of Commerce at Port Townsend, and you had better send for it.

There is or has been a large timber area just back of the town. Much clearing has been done, some of it by human hands, some of it by fires. On these clearings there are now good farms where about all the usual kinds of farm and garden produce are raised, except field corn, which is not a good crop here. If it *isn't* a corn country it *is* a fruit region, and all fruits not of a tropical character make themselves "at home" to a surprising degree. Peaches seem not to like the climate, but cherries dote on it. Then scattered here and there along the streams or lakes are natural cleared valleys, the finest places in the world for dairying and chicken-raising, and to this they are devoted. Good land can be bought for $10 per acre and upward. It was a rare sight to ride about the Chimacum valley and see the high and intelligent state of cultivation found there and the successful dairying carried on.

The soil of these valleys produces the timothy, rye, and clover grasses in abundance. Mixed peas and oats are also sown for hay, and the best known root crops for dairy herds are grown. There are many silos in use, and clover, peas, and oats are the silage crops.

Nearly every farm has its own dairy herd of pure Jerseys or Holsteins and graded cows from these stocks.

In the little Chimacum valley there are 900 cows connected with the three creameries there, and the output is about 200,000 pounds of fine creamery butter and 75,000 pounds of cheese yearly. The local market for this product is good and the surplus goes mostly to Alaska.

A few cows from Valley Farm herd— H L Blanchard.

In connection with the dairies many hogs are raised and the skim milk goes to the porkers and the young calves.

Poultry-raising is very profitable, as high as $2.85 net profit per hen being realized from a flock of 300 hens.

The average prices realized are, for butter 25½ cents, cheese 11 cents, pork

8 cents, beef 7 cents, poultry 14 cents per pound, and for eggs, 27 cents per dozen.

Owing to the mild climate stock graze nearly all winter and need little housing.

Port Townsend itself is a well-built town of 4,000 inhabitants, with gas, electric lights, water works, telephones, public library, etc. The United States custom house cost $275,000, United States marine hospital $40,000, the courthouse $200,000, and the high-school building $60,000. There are a salmon cannery, saw mill, two sardine canneries, and many other industries natural to such a place and location.

One of the sardine canneries I visited and was surprised to see such fine sardines packed as are found here. There is a heavier demand for this product than can be supplied, and it seems sure to increase in importance. I know the sardines are good, for I sampled them.

At Port Hadlock, at the southern extremity of Port Townsend bay, is the large lumber mill of the Washington Mill Company. Just north of Port Hadlock, at Irondale, I met with a surprise. Here is the very complete plant of the Pacific Steel Company, where they make as fine a pig iron as is to be found in the world, and they can not make enough to supply the demand. The entire output, I believe, goes to the iron and steel working establishments on the Pacific coast. The product from these furnaces was used in the construction of the United States warships Oregon, San Francisco, and Charleston.

Irondale Smelter,
owned and operated by Pacific Steel Co.

The Port Townsend harbor, owing to its moderate depth — from 60 to 120 feet — and good holding ground, is unsurpassed on the coast and is a favorite with sailing-vessel masters. Those who think that sailing ships have gone from the sea would have to reconstruct their ideas after visiting this locality. The harbor is very large and well protected from storms, and will float an enormous fleet. A few miles across country is Discovery bay, another good harbor and a beautiful sheet of water, opening on the Strait of Fuca.

When the government fortifications are completed, which will be at a total cost of about $7,500,000, these waters will be well protected. Fort Worden is placed on Point Wilson, Fort Flagler on Marrowstone point, and Fort Casey on Admiralty Head of Whidby island.

At present Port Townsend, Irondale, New Dungeness, Port Angeles, etc., have water communication only with the rest of the world, but steamers of all sizes run between these points and Victoria, Everett, Seattle, and Tacoma. The lack of direct rail connection down the west side of the sound with the Northern Pacific at or near Olympia, is undoubtedly something of a handicap at present.

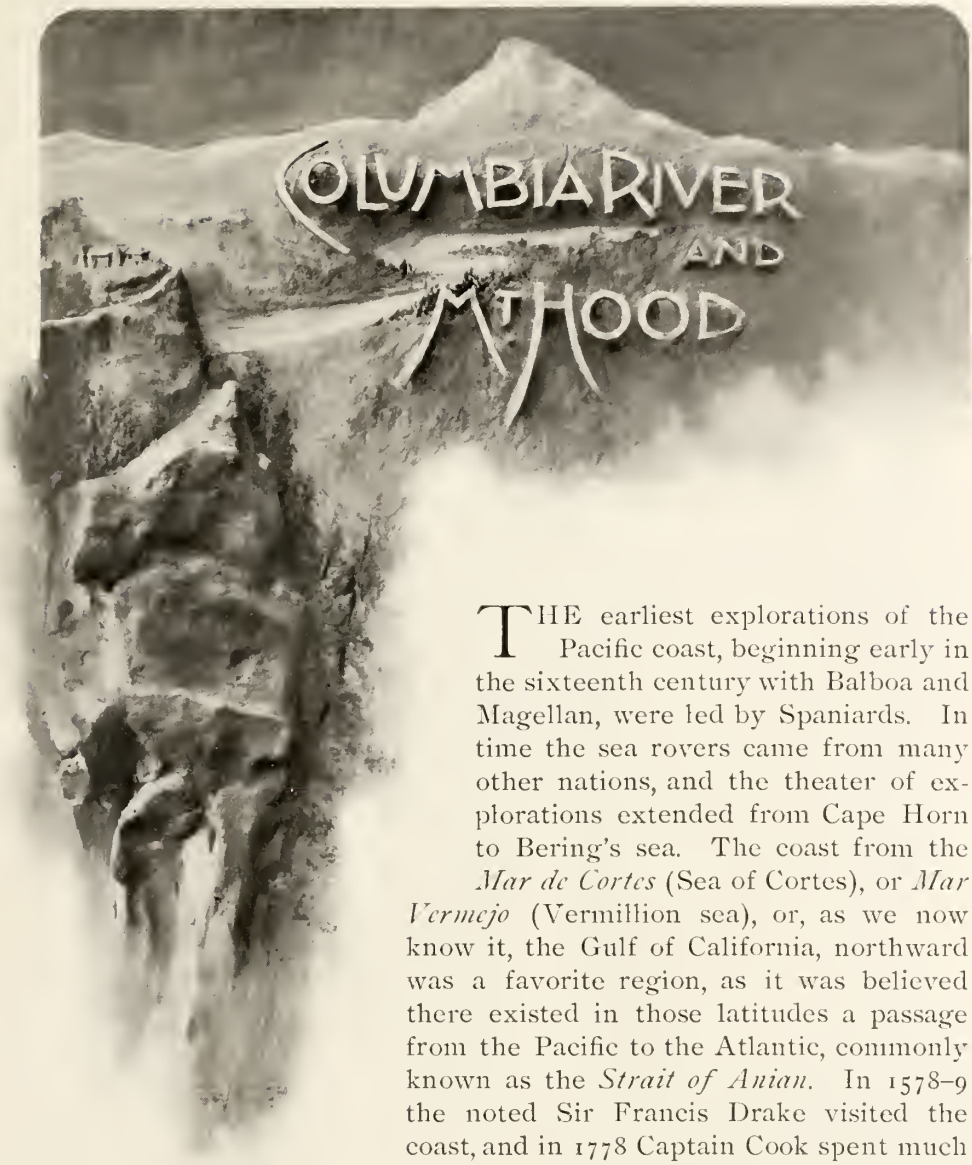
As some compensation, however, for the man who is willing to go in now and possess the land and wait for the better time to come, land prices are low and the country is not crowded.

For the man of moderate means and refined tastes, or one in delicate health who wishes to engage in dairying and poultry-raising or establish a little fruit farm where living is not expensive and the climate is mild and agreeable, the country on the western shore of Puget sound and its various arms and inlets can be commended as worth a visit and investigation.

Not the least important item in connection with the entire Sound region is its close connection with Alaska. The commercial trade with the Alaskan country has assumed great proportions and the Puget sound cities have the cream of it.

From Tacoma and Seattle, too, the tourist starts on the pleasure trip to Alaska and its wonderful glaciers, making the round trip in a new, modern, and commodious steamer, in about twelve days. There is no seasickness on this trip, it being made by the inland passage via Port Townsend, Victoria, Vancouver, Juneau, etc. On this trip one has all the comforts of travel and sees the finest scenery in the world.

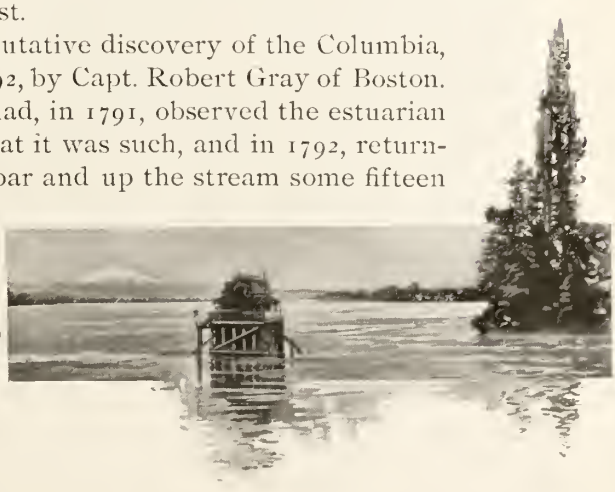
Public school (Lincoln Building), Olympic range.



THE earliest explorations of the Pacific coast, beginning early in the sixteenth century with Balboa and Magellan, were led by Spaniards. In time the sea rovers came from many other nations, and the theater of explorations extended from Cape Horn to Bering's sea. The coast from the *Mar de Cortes* (Sea of Cortes), or *Mar Vermejo* (Vermillion sea), or, as we now know it, the Gulf of California, northward was a favorite region, as it was believed there existed in those latitudes a passage from the Pacific to the Atlantic, commonly known as the *Strait of Anian*. In 1578–9 the noted Sir Francis Drake visited the coast, and in 1778 Captain Cook spent much time in exploring the coast of the far Northwest.

The putative discovery of the Columbia, Achilles of rivers, was on May 11, 1792, by Capt. Robert Gray of Boston.

Gray, in his ship, the Columbia, had, in 1791, observed the estuarian mouth of the river and concluded that it was such, and in 1792, returning to investigate, sailed across the bar and up the stream some fifteen or twenty miles, thus making supposition absolute certainty and—DISCOVERY. Others had seen this opening before Gray



Lighthouse at junction of Willamette and Columbia rivers.

Lava Column on the Columbia.

Columbia River.
Castle Rock in the distance.

Cape Horn, Columbia River

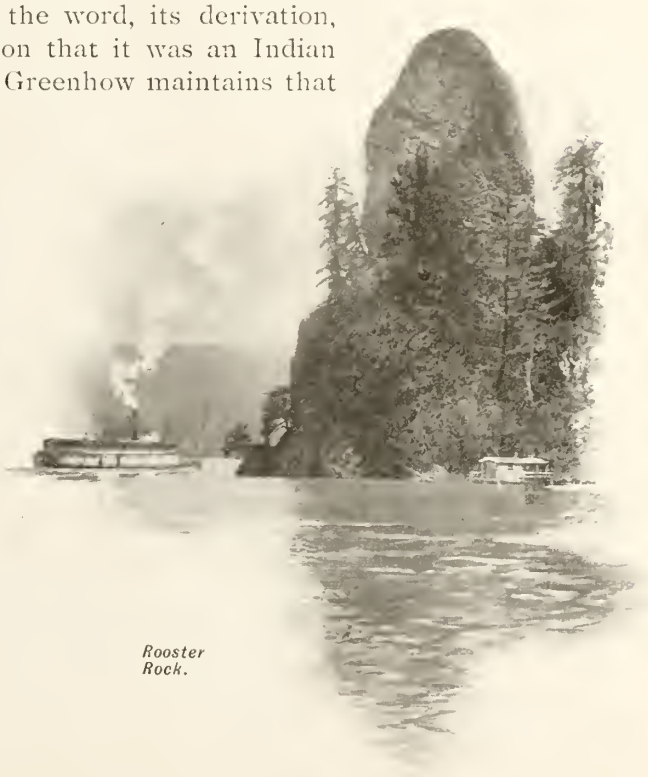
did, but concluded that it was simply an inlet of the sea. Heceta, a Spaniard, in 1775 saw the broad bay, and it was afterward shown on Spanish maps as *Entrada de Heceta* and *Rio San Roque*. Heceta called the promontory now known as Cape Disappointment *Cape San Roque*, but made no effort to cross the bar and explore the river. Meares, an Englishman, in 1788 sailed over the bar, anchored in what is now Baker's Bay, to which he gave the name Deception Bay, satisfied himself that *no fresh water stream existed*, gave a new name, Cape Disappointment, to the bold northern headland, and sailed away. Gray seems to have intuitively felt that the river was there, so when *he* successfully navigated the breakers he sailed away up the broad estuary until he found that he was right, thereby became the real discoverer, and then gave to the mighty river the name COLUMBIA, after the ship which first fairly floated upon its tidal current, and upon this discovery and name hinged momentous results.

We are most of us familiar with those lofty, sonorous lines from Bryant's "Thanatopsis":

> "Where rolls the Oregon and hears no sound
> Save its own dashings,"

in which the word Oregon is applied to the Columbia. Whence came the name? This may be said to be a great historical conundrum or puzzle.

Capt. Jonathan Carver of Connecticut, in 1766, explored the Northwest by way of the Great Lakes. In his account he frequently mentions the river *Oregon* and lays it down approximately correct, from a geographical standpoint, as applied to the Columbia. Carver gave no explanation of the word, its derivation, meaning, etc., and the presumption that it was an Indian word can not be substantiated. Greenhow maintains that it could not have come from the Spanish *Oregano*, or *Orejon*, and that it was probably a pure invention of Carver's. General Applegate of Oregon plausibly suggested that it was a corruption of the Spanish *Aragon*, and was the name given to both river and country by the Spaniards about the time Carver was engaged in exploration, from a fancied resemblance to Aragon in Spain. Harvey W. Scott of the Portland *Oregonian*, in Vol. I, No. 2, June, 1900, of the *Oregon Historical Society Quarterly*,



Rooster Rock.

Mount St. Helens and Mount Rainier from Portland and the Columbia River.

Portland Harbor and Willamette River.

discusses this question with, perhaps, a favorable leaning toward *Aragon* as a possible source, but from another point of view than that of Applegate. Be all this as it may, historians are ignorant as to the actual derivation of the word—except that it was used by Carver—and the name Columbia easily supplanted Oregon as the name of the river. Until the final determination of the Northwestern boundary line, the region drained by the Columbia was a storm center in British-American politics.

The river is some 1,200 to 1,400 miles long, and drains a basin or basins aggregating 400,000 or 500,000 square miles. Oregon, Washington, British Columbia, Idaho, Montana, Wyoming, Utah, and Nevada all contribute to swell its swirling flood. It is of the lower Columbia only, however, that I purpose now to write.

At its mouth, opposite Cape Disappointment, or Cape Hancock, as it is also called, the river is seven miles wide, and above, at Astoria, it is wider still. The tide is felt as high up as the Cascades, a distance of nearly 150 miles. The river is easily navigable for ocean-going steamers and ships to beyond its junction with the Willamette, and ocean steamers go up that river as far as Portland, which is *on the Willamette*, not the Columbia. In the very early days the Columbia river bar was a great bugbear, but when once the channel was surveyed and understood the difficulties of navigation largely vanished.

The scenery of the river below the Willamette is very different from that of the river above. The mountains are more remote and the highlands near the stream are less brusque and gigantic in their cast. About the mouth, the bluffs and points are prominent, and historic associations cluster thickly. Tongue point, Cape Disappointment, Chinook point, Gray's and Baker's bays, Lewis and Clark's river, Astoria, etc., are reminders of 100 years ago. The tourist should visit Astoria, Fort Canby, and Cape Disappointment lighthouse, and from the latter look far out over the Columbia bar. Standing beside the lighthouse, in the south distance the government jetties are faintly seen in outline; to the west, five miles out at sea, the light ship, more dimly still, is seen, while below us and stretching across to the jetties and to Point Adams, the Pacific surges come tumbling over the bar in boiling, whitening, maelstromic fashion, forming currents, cross currents, eddies and whirlpools, while the spray, as the surf thunders against the base of the rock on which we stand, is dashed high up over the lighthouse. Fort Columbia, opposite Astoria, is a modern fort, mounting the newest of heavy seacoast ordnance, and is probably upon or near the site of the ancient Chinook village of Comcomly, the one-eyed chief so often mentioned in Irving's *Astoria*.

Saddle mountain, many miles back from the river on the Oregon side, is an old-time landmark noted by Lewis and Clark and others.

Long Beach, on the Washington, and Flavel, Clatsop, and Seaside, on the Oregon side, are summer seaside resorts, easily reached by daily river steamers and railway trains. The ocean beaches are clean and hard, and there are innumerable hotels and boarding houses for the accommodation of tourists. Few Atlantic coast resorts have as fine beaches as are found here, and the steamers are the

Steamer Bailey Gatzert and Portland, Oregon, wharves.

Salmon Cannery on Lower Columbia River.

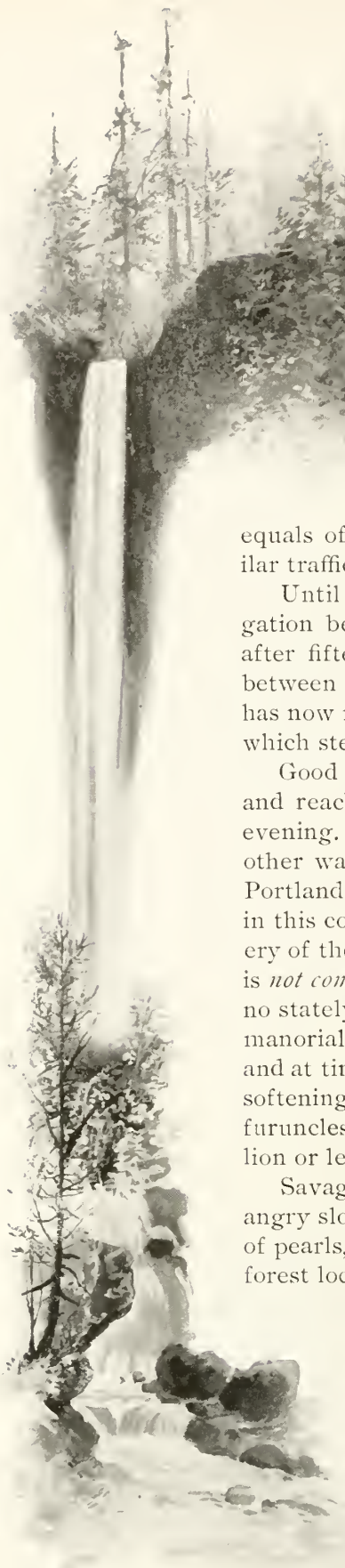
Astoria, Ore. and Tongue Point.

equals of those found on the Atlantic coast engaged in similar traffic.

Until recent years the Cascades blocked continuous navigation beyond them to the Dalles on the upper river, but after fifteen years or more of work and an expenditure of between three and four millions of dollars, the government has now in operation a splendid lock at the Cascades through which steamers pass with scarcely any loss of time.

Good river steamers leave Portland daily each morning, and reach Dalles City, about 175 miles distant, early in the evening. Or the trip can be made one way by boat and the other way by rail. One who has or can command a day at Portland will find this trip the grandest of its kind certainly in this country, and possibly in the world. The natural scenery of the Rhine or the Hudson, in wild, stupendous grandeur, is *not comparable* to the Columbia. There are here, it is true, no stately castles as on the Rhine, nor beautiful, wide rolling, manorial estates, as on the Hudson; nature, unconventional and at times almost riotic, holds wild sway here. No gentling, softening hand has smoothed out the wrinkles and leveled the furuncles of the old dame; they are now as they were a million or less years ago, rough and protuberant.

Savage cliffs, æolic winds, beetling crags, rasping cascades, angry slopes, threshing waters, obelisks of adamant, cataracts of pearls, are the order here. Great headlands crowned with forest locks; massive, detached rock pinnacles; tenuous falls hundreds of feet high; giant peaks whose polls are swathed in cloud wrappings; palisades of lava, rising thousands of feet above the mighty river, overwhelm us by their vast and magnificent proportions and awe us by the tremendous intensity of it all. We are in the land of the Philistine, of



Latourelle Fall.

titanic forms, and as our steamer cuts the waters of the inland sea above the Cascades, or the whistle and exhaust of the locomotive echoes against the cliffs, we feel our own utter littleness and know that the finger of the Almighty has touched with a great, lasting glory, every crag and wave and mountain and waterfall.

An interesting spot on the river is Vancouver, the old Fort Vancouver of Doctor McLoughlin and the Hudson's Bay Company, just above the mouth of the Willamette river. Grant, Sheridan, and other young army officers were once stationed here, and some of them took their first lessons in Indian warfare in this region, after the post became an American one. Grant was stationed here in 1852–3, and writes interestingly of the country in his memoirs. Sheridan was here in 1855–6, and took an important part in repelling two Indian uprisings, and he commanded a relief expedition from Fort Vancouver to succor those besieged at the historic blockhouse at the Middle Cascades, and for his success he was commended by General Scott in general orders. Sheridan describes it all in his memoirs. The blockhouse long since crumbled to decay.

Above Vancouver, Rooster rock and Cape Horn — one a remarkable basaltic column, the other a high, long, terraced palisade of the same brownish-black material — draw the traveler's attention. They are almost opposite each other on either side of the river. The rock is one of the finest examples of its kind to be found anywhere, and is noteworthy from whatever point it is viewed.

The Horn rises sheer from the water to an altitude of 500 feet; then comes a terrace, and then another rise to a height, above water, of 2,000 feet. At the proper season cascades come tumbling down the precipice. The steamers plow along close to the rock, so that one obtains a good view of it.

Cascade Locks and steamer Dalles City entering locks.

Between Rooster rock and Cascade Locks there are, on the Oregon side, a series of most lovely and extraordinary waterfalls dropping daintily from the cliffs, hundreds of feet to the level of the Columbia. These falls are of a decidedly unusual pattern, which makes them more attractive. They are narrow, somewhat hidden in the clefts of the rocks as if affected by extreme modesty, and seem to float or flutter down more like long streamers of lace than in the conventional manner of waterfalls. They are, as seen from the steamers, swaying threads of spray, each, however, having its own individuality.

The most striking and best known of these is Multnomah fall, reliably stated to be more than 800 feet high, although it seems impossible to believe it. It comes down in two graceful flights, its first being much the higher, but the effect is not lessened by this breaking of unity. Of course there is a Bridal Veil, and Latourelle and Horse Tail are others. One of the conspicuous objects on the Washington shore is Castle rock, several hundred feet high. This is the Beacon rock of Lewis and Clark, and the latter is a much more appropriate name for it. Doctor Parker writes of this in 1835, as Pillar rock. Until the summer of 1901 it was never known to have been climbed.

At the Cascades will be shown the tremendous abutments of the Natural Bridge of Indian tradition.

Multnomah Fall.

Castle Rock (Beacon Rock of Lewis and Clark).

These rise on either shore 2,500 feet, perhaps higher, and are magnificent escarpments of rock.

The Cascades themselves are typical of their kind, but while wonderfully fine are hardly as interesting as the Dalles above. All travelers have noted the change in the river at this point. From the swift, eddying current comes a transition to a long, dead sweep of water extending for miles above the Cascades.

Various geological interpretations have been given for the obstruction formed here, but it has generally been ascribed to landslides. Apparently, awful wrenchings have taken place, whole mountain-sides have been ripped, sliced, torn violently from the mother range, and have slid bodily toward and into the stream. It is rare, indeed, that one sees such an instance of it as here. Above the Cascades, near Viento, the stumps of submerged trees may be seen in the water along the beach, and miles of wonderful palisades crown the heights above. Whether the landslides have actually occurred or not, the appearance is very real, but Doctor Newberry gives another explanation for the dam He says: "As I have mentioned, the vicinity of the falls [Celilo] has been the scene of recent volcanic action. A consequence of this action has been the precipitation of a portion of the wall bordering the stream into its bed. This impediment acting as a dam, has raised the level of the water above the Cascades, giving to the stream its lake-like appearance, and submerging a portion of the trees which lined its banks, * * * * and their degree of preservation attest the modern date of the catastrophe," which opinion is also confirmed by Mr. Gilbert of the U. S. G. S.

Wind mountain is a noted landmark on the Washington shore. We are here in the heart of the Cascades, swiftly — if the wind at Wind mountain be not too strong — plowing through by steamer, or speeding alongside by rail, a larger and grander Tappan Zee than the famed one of the Hudson. If the clouds hang low on some of the mountains and a dash of rain or a veil of mist curtains off a part of the scene, the effect is grandly heightened. In the time of Lewis and Clark, the Astorians and those following them, the river banks were lined with an almost continuous succession of Indian settlements, and a rascally lot their denizens were, for the most part. Disease, principally, wiped them from the earth long ago, and naught save the grinning skulls and bleaching bones on the Sepulchre islands now remains of them, save here and there a remnant of a tribe or family.

Near the renowned Dalles is Memaloose island, the place of the Indian dead. There are really a number of Memaloose islands around the Dalles, and all of them were used as burial places, but the particular Memaloose island is below Dalles City, and is known by a rough stone monument which marks the last resting place of Vic. Trevitt, a white man, who preferred sepulture there to being buried in the white

man's burial ground. Bones and skulls are now found scattered over these islands in general disorder.

The Dalles, which lie some miles above the town of the same name, have never failed to excite the wonder of the traveler. They extend for several miles, and the river, compressed into a narrow channel or channels, rushes, boils, seethes through a magnificent flow of basalt, having abrupt, vertical walls of moderate height. Whirlpools and eddies must be encountered by the venturesome voyager who risks the water passage. This Lewis and Clark did successfully, and the Hudson's Bay Company men used often to take the chances, but it is dangerous in the extreme, and many lives have been lost there.

Above the Dalles are the Great or Celilo falls, a combination of rapid and fall extending for a mile or more diagonally across the river. The scene here, at low water, is a very fine one. The falls are not high —20 to 40 feet—but the power of the 1,000 or more miles of mighty river above seems concentrated here in one supreme effort to do something that will give it renown to remotest generations, and it does it, for, taken in connection with the long, ragged line of cascades or rapids, the falls form one of the liveliest, most engaging, lasting bits of scenery of the sort that I know of.

Here the rough, timber-decked mountains change to tawny or brown, bare, lava-terraced escarpments, with the river banks or flood plain covered with a most remarkable array of sand-dunes.

While the aspect is somewhat drear, both the dunes and the lava bluffs are very interesting. The sand is constantly in motion and arranges itself in graceful, symmetric, wind-riffled designs and figures.

The Great or Celilo Fall.

One of the important towns along the river is Hood River, at the mouth of the river of that name, between the Cascades and the Dalles.

From Northern Pacific trains near the junction of the Columbia and Willamette rivers, on a clear day one will see Mounts Rainier, St. Helens, Adams, Hood, and Jefferson, a rare alpine feast, and, without exaggeration, probably the finest sight of the sort in America.

Hood is really the most beautiful of these, and from Hood River one may easily visit the mountain. Twenty-

seven miles of stage-coach travel alongside the brawling Hood river, through a Cascade forest after the first few miles, brings the traveler to Cloud Cap Inn, perched upon a jutting shoulder of the mountain 6,500 feet above sea level.

The first miles of travel are through thousands of acres of strawberry patches, varying from two to forty acres in size. The Hood River strawberry — Clark's seedling — is noted on the coast for all that is best in this luscious berry. Many thousands of crates of this fruit are shipped from Hood River yearly, and as one rides through the valley a desperate longing comes over you to own a strawberry ranch. The Hood River berry is a type of those raised by irrigation in Montana, Washington, Idaho, and Oregon, and it is no wild prophecy to say that, eventually, the berries and the larger fruits of the Northwest, as well, will be shipped to all parts of the United States in enormous quantities, for the flavor and color of Northwestern fruits are unsurpassed and even rarely equaled elsewhere. As yet the local demand is hardly met.

If, before one reaches the Inn, the ride up mountain seems a little like "linked sweetness long drawn out," bear in mind that on the return ride down the mountain in the cool, early dawn, you will feel as if skimming the air on wide-spreading pinions.

The Inn is a quaint, home tavern of logs, granite, and angles, and one story in height. Heavy cables are carried over it and solidly anchored in the ground so that Boreas, in his antics, may not pick it up and away with it. A platform on the roof affords a view wonderful, indeed, in its scope and character, and such as can be found only in this region.

When you go there, insist on having a room whose windows are open toward Jerusalem, Jerusalem in this case being the peak of Mount Hood, which rises back of and within two miles of the Inn and some 5,000 feet above it.

Mount Hood is peculiar in that from whatever side I have yet seen it, it appears the same — one sharp, angular peak and only one, a mammoth, natural, alabaster-like pyramid.

In the early days it was a well-known landmark and was thought to be 19,000 feet high, whereas it is only a little more than 11,200 feet in height. An attempt was once made by Hall J. Kelley, an irrepressible, and, perhaps, in the main, a sensible eastern enthusiast over the Oregon country, to rename the Cascade range the President's range and the mountain itself Washington, after George Washington, but it was unsuccessful. Vancouver, or more correctly, Lieutenant Broughton, one of his officers, named it after Lord Hood of England, in 1792. In the early days, when it might have been successful, an attempt should have been made to rename these various mountains after the names the Indians gave them.

Lounging-room and fire-place, Cloud Cap Inn.

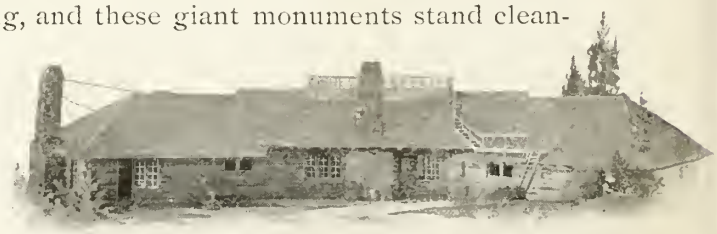
Cloud Cap Inn and Mount Hood.

Close at hand the mountain, of course, loses that enchantment which distance lends, but we gain in detail. The peak appears to rise almost immediately over us; its ribs protrude; the rough, scraggy glaciers, white above, a muddy brown-black below, come tumbling down the mountain, disjointed and torn, so that we can study, particularly if one has a glass, their texture and manner of life, more or less.

Rolling up from the deep gulch below us comes the sound of falling waters, the white glacial stream breaking loose from the parent glacier and whisking off and away down the mountain to the valley, free for evermore of its frozen prison house.

And from the windows of dining-room, lounging-room, and bedroom, the eye roams o'er a wide, rolling, black and green, corrugated landscape, the great Cascade forest, punctuated by white obelisks, Rainier, Adams, and St. Helens.

The atmosphere is as clear to the sight as the tones of a bell are to the ear on a frosty morning, and these giant monuments stand clean-cut and white out of a vast labyrinth of heavy timber, like stars in the firmament. These peaks range in distance from Hood, from



Cloud Cap Inn.

about sixty miles for St. Helens to more than one hundred for Mount Rainier.

On the downward ride from the Inn all this view is unscrolled before us, and we can almost imagine that we are literally floating down through the tree-tops.

It is difficult to describe the effect of a few days' sojourn at this remarkable spot, the upliftment and exhilaration felt. One seems out of the world and yet overlooks a good bit of it, relatively. Standing upon one of the best of the view points one can, I think, have a better understanding of what the devil thought might be the effect of taking Christ up into a high mountain and offering Him dominion and power over the kingdoms of the world if He would but fall down and worship him.

Those so inclined may climb to the summit of the peak quite easily, from the Inn, or make other and various trips about the mountain. A supply of alpenstocks, etc., is kept on hand for the use of the more adventurous.

The pure mountain air and good food found here are wonderfully tonic, as I know from experience, and for a clean, healthful, unconventional, resting, outing spot I know of none better than Cloud Cap Inn.

In 1905 there will be held at Portland, Ore., the centennial celebration of the arrival of Lewis and Clark in 1805 and their winter sojourn upon the coast. The grounds where this celebration will be held are on the banks of the Willamette river, upon the waters of which Captain Clark made his way in the spring of 1806 on a tour of exploration. In furtherance of this scheme, which commemorates so much of tremendous importance to the entire Northwest and, in fact, to the whole country, Portland and Oregon are going to provide an exhibition in keeping with the occasion. Let me suggest that plans be formed for visiting the North Pacific coast in 1905, making the Portland centennial the nucleus for the trip of your life.

Mount Hood, from Columbia River.

NORTHERN PACIFIC RAILWAY

Rates and Arrangements for the Tourist Season of 1903.

(SUBJECT TO CHANGE WITHOUT NOTICE.)

MINNESOTA SUMMER RESORTS

During the summer season the Northern Pacific Railway will sell round-trip excursion tickets from St. Paul or Minneapolis to Glenwood (Lake Minnewaska) at $5.25; Battle Lake, $7.50; Fergus Falls, $7.50; Pine River, $7.85; Backus, $8.35; Walker, $8.65; Bemidji, $10.10; Perham, $7.75; Detroit Lake, $9.15; Minnewaukan (Devil's Lake), $18.65; Winnipeg, $22.50. From Duluth to Deerwood, $3.80; Battle Lake, $7.50; Fergus Falls, $7.50; Pine River, $6.90; Backus, $6.90; Walker, $6.90; Bemidji, $6.90; Perham, $7.75; Detroit Lake, $9.15; Minnewaukan, $18.65; Winnipeg, $22.50. From Ashland, Wis., to Battle Lake, $9, Fergus Falls, $9; Pine River, $8.40; Backus, $8.40; Walker, $8.40; Bemidji, $8.40; Perham, $9.25; Detroit Lake, $10.65; Minnewaukan, $20.15; Winnipeg, $22.50. Transit limits to Minnesota resorts one day (from Ashland two days), to Minnewaukan (Devil's Lake) and Winnipeg two days in each direction. Good to return on or before October 31st.

Round-trip summer excursion tickets will be sold from St. Paul, Minneapolis, or Stillwater to resorts on the "Duluth Short Line," as follows: Forest Lake, $1; Wyoming, $1.20; Chisago City, $1.45; Lindstrom, $1.55; Centre City, $1.60; Taylors Falls, $1.80; Rush City, $2.15; Pine City, $2.55. Tickets on sale daily; limit, ten days. From St. Paul or Minneapolis to White Bear and return, 50 cents; Bald Eagle or Dellwood and return, 55 cents; Mahtomedi and return, 60 cents. Tickets on sale daily; limit, thirty days. Summer excursion rates from St. Paul, Minneapolis, or Stillwater to White Bear Lake points or Bald Eagle and return, tickets on sale week days, going and returning on date of sale, 35 cents; tickets on sale Sundays, going and returning on date of sale, 25 cents.

YELLOWSTONE PARK RATES

$5 TICKETS.—On sale at Livingston, Mont., June 1st to September 19, 1903, inclusive. The $5 ticket includes railway and stage fares Livingston to Mammoth Hot Springs and return.

$49.50 TICKETS.—The $49.50 ticket includes railway and stage fares Livingston to Gardiner (Cinnabar) and return, stage Gardiner (Cinnabar) to Mammoth Hot Springs, Norris, Lower and Upper Geyser Basins, Yellowstone Lake, Grand Cañon and Falls of the Yellowstone and return, and not to exceed five and one-half days' board at the Park Association hotels. On sale at Livingston June 1 to September 14, 1903, inclusive.

$56.90 TICKETS.—A $56.90 round-trip ticket from St. Paul, Minneapolis, or Duluth to Mammoth Hot Springs and return will be on sale at points named from May 30 until September 12, 1903, inclusive. Limit, good going thirty days, returning ten days; final limit, forty days. The return portion of ticket must be signed and stamped at Livingston, Gardiner (Cinnabar), or Mammoth Hot Springs, and presented on train on or within one day of such date. Stop-over allowed within limit of ticket.

$92 TICKET.— This ticket covers rail transportation St. Paul, Minneapolis, Duluth, or the Superiors to Gardiner (Cinnabar), stage transportation Gardiner (Cinnabar) to Mammoth Hot Springs, Lower, Midway, and Upper Geyser Basins, Yellowstone Lake, Grand Cañon, Falls of the Yellowstone and return to Mammoth Hot Springs and Gardiner (Cinnabar); necessary meals and lodging at Yellowstone Park hotels for not to exceed five and one-half days and rail transportation Gardiner (Cinnabar) to St. Paul, Minneapolis, Duluth, or the Superiors, or via Billings to the Missouri River.

Tourists who are not going west of Livingston should purchase the $92 ticket.

$105 TICKET.— This ticket covers rail transportation from St. Paul, Minneapolis, Duluth, or the Superiors to Gardiner (Cinnabar), stage transportation Gardiner (Cinnabar) to Mammoth Hot Springs, Lower, Midway, and Upper Geyser Basins, Yellowstone Lake, Grand Cañon and Falls of the Yellowstone and Monida, necessary meals and lodging for not to exceed six and one-quarter days between Gardiner (Cinnabar) and Monida, and rail transportation from Monida, either via Oregon Short Line R. R. and Union Pacific to Missouri River points, or via O. S. L. R. R. to Ogden, any line Ogden to Denver, thence via either the B. & M. R. R. R., Union Pacific, A., T. & S. F. Ry., C., R. I. & P. Ry , or Missouri Pacific Railway to Missouri River terminals.

This ticket will be on sale May 30th to September 12th, inclusive, and will be limited to thirty days going to Mammoth Hot Springs and thirty days returning, with final limit of sixty days from date of sale.

$84 TICKET.—This ticket covers rail and stage transportation only (no meals or lodging being included therein) for the same tour as the $105 ticket. Limits, selling dates, and other conditions, except as noted, will be same as for $105 ticket.

The trip through the Park must be completed by September 19, 1903.

MONTANA, EASTERN WASHINGTON, AND EASTERN BRITISH COLUMBIA POINTS

The Northern Pacific Railway has on sale, at reduced rates, round-trip excursion tickets from St. Paul, Minneapolis, or Duluth to Billings, Springdale, Livingston, and Bozeman, Mont.; Helena, Butte, and Anaconda, Mont. (choice of routes returning from Helena, Butte, and Anaconda, via Northern Pacific, or Great Northern Railway, or from Butte at a higher rate, via Oregon Short Line and connections); Missoula, Mont.; Spokane, Wash. (choice of routes returning, via Oregon Railroad & Navigation Company and its connections, or via the Great Northern, or Northern Pacific Lines); Medical Lake, Pasco, Walla Walla, Kennewick, and Toppenish, Wash.; Nelson, Trail. Rossland, Ainsworth, Kaslo, and Sandon, B. C., and Coulee City, North Yakima, and Ellensburg, Wash.

These tickets are of ironclad signature form; require identification of purchaser at return starting point.

Any of the above tickets may read to return via Billings direct to the Missouri River, or when destination is Helena, or Butte, Mont., or a point west thereof, via Billings, Denver, and any direct line to the Missouri River except that Helena, Butte, Anaconda, and Missoula tickets will not be good for return via Billings, Denver, and the Union Pacific Railway.

NORTH PACIFIC COAST EXCURSIONS

A $90 round-trip individual excursion ticket, St. Paul, Minneapolis, or Duluth to Tacoma, Portland, Seattle, Everett, Whatcom, Vancouver, or Victoria, is on sale daily at points first named and by Eastern lines.

Tacoma, Seattle, Everett, Whatcom, Victoria, Vancouver, or Portland tickets, at above rates, will be issued, going via Northern Pacific, returning via same route, or Great Northern, or Soo-Pacific to St. Paul, Minneapolis, or Duluth; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings to the Missouri River, either direct or via Denver; Portland tickets will also be issued, returning via Oregon Railroad & Navigation Company and its connections to either Omaha or Kansas City, or to St. Paul via Sioux City.

Above tickets limited to nine months from date of sale, good, going trip, sixty days to any one of North Pacific Coast termini named, returning any time within final limit.

ALASKA EXCURSIONS

An excursion ticket will be sold from Eastern termini named to Sitka, Alaska (not good on steamer Spokane), at $150, which rate includes meals and berth on the steamer.

The steamer Spokane will make six Alaska excursion trips, leaving Tacoma and Seattle early in the morning on May 26th, June 9th and 23d, July 7th and 21st, and August 4th, 1903; arriving at those points on the return about twelve days later. The route will be especially arranged to give passengers an opportunity to see all interesting and accessible glaciers and the most important ports. Round-trip rate from St. Paul, Minneapolis, or Duluth, including meals and berth on steamer Spokane, $190.

Tickets on sale May 1st to September 30th. Limit, nine months. Going to Tacoma, sixty days, returning within final limit, holder to leave Sitka on or before October 31st. Tickets will be issued to return either via the Northern Pacific, Soo-Pacific, or Great Northern lines to St. Paul or Minneapolis, or via Canadian Pacific Railway to Winnipeg or Port Arthur, or via Billings to the Missouri River, either direct or via Denver. Usual stop-over privileges granted. Steamer accommodations can be secured in advance by application to any of the agents named on appended list. Diagrams of steamers at office of General Passenger Agent at St. Paul. Only the steamer Spokane will call at Glacier Bay.

CALIFORNIA EXCURSION RATES

The Northern Pacific Railway will sell round-trip excursion tickets from St. Paul, Minneapolis, or Duluth as follows:

To San Francisco, going via the Northern Pacific, Seattle, and steamer, or Portland and the Shasta Route, or the ocean to San Francisco; returning via rail or steamer to Portland, or via steamer to Seattle or Victoria, and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings to the Missouri River, either direct or via Denver; or via rail or steamer Portland and Huntington to the Missouri River; or returning by the southern lines to Council Bluffs, Omaha, Kansas City, Mineola, or Houston, at $105; to New Orleans or St. Louis, at $111.

To Los Angeles, going via Portland and Shasta Route, and returning via rail, Portland and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Billings or Huntington to the Missouri River, at $124; or going via Portland and Shasta Route and returning via San Francisco and Ogden to Council Bluffs, Omaha, or Kansas City, at $114.50; to St. Louis, at $120.50.

To San Diego, going via Portland and rail through Los Angeles, and returning via rail, Portland and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings or Huntington to the Missouri River, at $130.50; or going via Portland and Shasta Route and returning via San Francisco and Ogden to Council Bluffs, Omaha, or Kansas City, at $121; to St. Louis, at $127.

Tickets via ocean include meals and berth on steamer.

At the eastern termini of the southern transcontinental lines excursion tickets will be sold, or orders exchanged, for tickets to San Francisco, returning via either the Shasta Route, the all rail line to Portland, or the ocean and the Northern Pacific to St. Paul, Minneapolis, or Duluth, at a rate $15 higher than the current excursion rate in effect between Missouri River points, Mincola, or Houston and San Francisco. The steamship coupon includes first-class cabin passage and meals between San Francisco and Portland.

These excursion tickets allow nine months' time for the round trip; sixty days allowed for west-bound trip up to first Pacific Coast common point; return any time within final limit.

GENERAL AND DISTRICT PASSENGER AGENTS.

BOSTON, MASS.—279 Washington Street.
C. E. FOSTER ..... District Passenger Agent.

BUFFALO, N. Y.—215 Ellicott Square.
W. G. MASON ..... District Passenger Agent.

BUTTE, MONT.—Cor. Park and Main Streets.
W. H. MERRIMAN ..... General Agent.

CHICAGO—208 South Clark Street.
F. H. FOGARTY ..... General Agent.
J. C. THOMPSON ..... City Passenger Agent.
C. A. MATTHEWS ..... District Passenger Agent.

CINCINNATI, OHIO—40 East Fourth Street.
J. J. FERRY ..... District Passenger Agent.

DES MOINES, IOWA—316-317 Citizens Bank Building.
E. D. ROCKWELL ..... District Passenger Agent.

DETROIT, MICH.—153 Jefferson Avenue.
W. H. WHITAKER ..... District Passenger Agent.

DULUTH, MINN.—332 West Superior Street.
T. E. BLANCHE ..... General Agent.

HELENA, MONT.—Main and Grand Streets.
A. D. EDGAR ..... General Agent.

INDIANAPOLIS, IND.—42 Jackson Place.
J. E. TURNER ..... District Passenger Agent.

LOS ANGELES, CAL.—125 West Third Street.
C. E. JOHNSON ..... Traveling Passenger Agent.

MILWAUKEE, WIS.—318-319 Herman Building.
CHAS. C. TROTT ..... District Passenger Agent.

MINNEAPOLIS, MINN.—19 Nicollet Block.
G. F. MCNEILL ..... City Ticket Agent.

MONTREAL, QUE.—Temple Building, St. James Street.
G. W. HARDISTY ..... District Passenger Agent.

NEW YORK CITY—319 Broadway.
W. F. MERSHON ..... General Agent Passenger Department.

PHILADELPHIA, PA.—711 Chestnut Street.
I. M. BORTLE ..... District Passenger Agent.

PITTSBURG, PA.—305 Park Building.
C.E. BRISON ..... District Passenger Agent.

PORTLAND, ORE.—255 Morrison Street.
F. O'NEILL ..... District Passenger Agent.
E. L. RAYBURN ..... Traveling Passenger Agent.

SAN FRANCISCO, CAL.—647 Market Street.
T. C. STATELER ..... General Agent Passenger Department.

SEATTLE, WASH.—First Avenue and Yesler Way.
I. A. NADEAU ..... General Agent.

SPOKANE, WASH.—Riverside and Howard Streets.
JNO. W. HILL ..... General Agent.

ST. LOUIS, MO.—210 Commercial Building.
P. H. NOEL ..... District Passenger Agent.

ST. PAUL, MINN.—5th and Robert Streets.
GEO. D. ROGERS ..... City Ticket Agent.

ST. PAUL, MINN.—4th and Broadway.
HARRY W. SWEET ..... District Passenger Agent.

ST. PAUL, MINN.—4th and Broadway.
G. W. MCCASKEY ..... District Passenger Agent.

TACOMA, WASH.—925 Pacific Avenue.
A. TINLING ..... General Agent.

VANCOUVER, B. C.—419 Hastings Street.
J. O. MCMULLEN ..... General Agent.

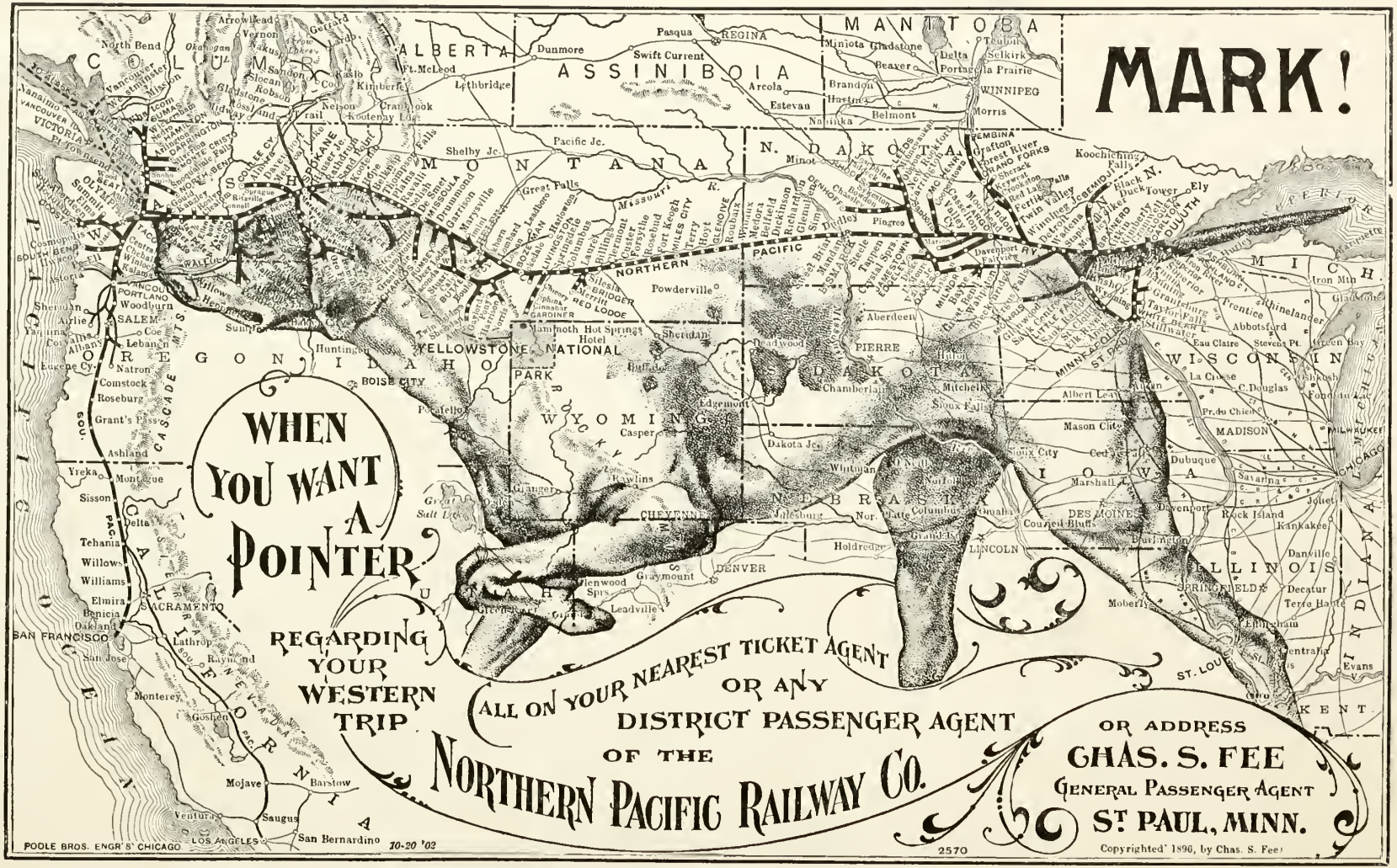
VICTORIA, B. C.
C. E. LANG ..... General Agent.

WEST SUPERIOR, WIS.—821 Tower Avenue.
F. C. JACKSON ..... Assistant General Agent.

WINNIPEG, MAN.—(Depot.)
H. SWINFORD ..... General Agent.

PORTLAND, ORE.—255 Morrison Street.
A. D. CHARLTON ..... Assistant General Passenger Agent.

ST. PAUL, MINN.
A. M. CLELAND ..... Assistant General Passenger and Ticket Agent.
CHAS. S. FEE ..... General Passenger and Ticket Agent.
J. M. HANNAFORD ..... Second Vice-President.



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